

Land Use Concepts

January, 2012

City Council

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Chris DeCerbo, *Principal Planner*
Jennifer Jesser, *Senior Planner (Project Manager)*
Kristina Ray, *Communications Manager*
Rachel McGuire, *Communications Coordinator*
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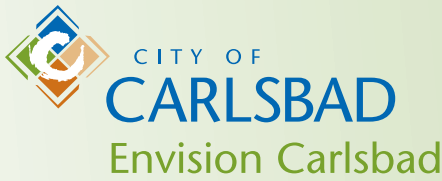
Consultants

DYETT & BHATIA
Urban and Regional Planners

Dudek, *Environmental Consultants*
Fehr & Peers, *Transportation Consultants*
Rosenow Spevacek Group, Inc., *Economic and Fiscal Consultants*

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Jeannie Sprague-Bentley	Tina Schmidt
–	Sean Sexton
Sean Bentley	Chris Korogi



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Introduction

1.1 Purpose of this Report

Purpose

This Envision Carlsbad Land Use Concepts Report represents an essential step in the second phase of the Envision Carlsbad process, which entails an update of the city’s General Plan, Local Coastal Program and Zoning Ordinance. The three land use concepts described in this report show a range of land use options to guide the future of Carlsbad toward achievement of the Carlsbad Community Vision, which is summarized in Section 1.3 of this report. Input from community members and stakeholders on the concepts will lead to formulation of a Preferred Plan, which will serve as the foundation for the new General Plan. The Preferred Plan will likely consist of the land use options found to be most desirable by the community, infused with new ideas generated during the public input process.

Because of the conceptual nature of the land use concepts, it is important to consider them relative to the overarching goals established in the Carlsbad Community Vision. More specific planning, including details on land use and development policies and regulations, will ensue once the Carlsbad City Council has accepted a Preferred Plan.

Report Organization

This report presents a quick overview of existing conditions as well as planned programs in Carlsbad followed by a presentation of the land use concepts and corresponding comparative analysis following this Introduction. The following summarizes the components of this report:

- **A Snapshot of the City.** Overview of existing land use patterns as well as circulation and existing and planned open space in Carlsbad.
- **Looking Ahead.** Description of the process for constructing the land use concepts.
- **Overview of Concepts.** Text, statistics and illustrations to describe the three land use concepts.
- **Comparison of Concepts.** Traffic, livability, fiscal and environmental impacts of the land use concepts are presented. Side-by-side summary of the distinguishing characteristics of the land use concepts, along with an expanded statistical summary.

1.2 Envision Carlsbad Background

Project Background

For more than two decades, Carlsbad has been developing and changing based on the premise of available land to accommodate a growing population while maintaining an excellent quality of life. Carlsbad’s basic guiding documents, such as the General Plan, were created on that premise. Today, however, with the city almost built-out, development will occur primarily through infill and redevelopment, which presents challenges to ensure the protection and enhancement of Carlsbad’s excellent quality of life.

The City Council, community leaders and city staff are facing these challenges head-on and initiated “Envision Carlsbad” to engage the entire community in a process of envisioning and planning for the future. In January 2010, the Carlsbad City Council adopted the Carlsbad Community Vision representing the community’s most important values, priorities and aspirations for the future. The community’s vision guides the second phase of the Envision Carlsbad process, which entails an update of the city’s General Plan, Local Coastal Program and Zoning Ordinance.

CARLSBAD EVOLUTION

Carlsbad today occupies approximately 39 square miles of rolling hills, beaches and bluffs along the northern coast of San Diego County. The city is located about 30 miles north of San Diego and about 90 miles south of Los Angeles. In addition to the Pacific Ocean coastline along its western boundary, Carlsbad is surrounded by the city of Oceanside to the north, the city of Encinitas to the south, and the cities of Vista and San Marcos and unincorporated areas of San Diego County to the east. Along Carlsbad’s northern edge, urban development abuts Highway 78, with the highway and Buena Vista Lagoon acting as a boundary between Carlsbad and Oceanside. Similarly, Batiquitos Lagoon along the city’s southern edge acts as a boundary between Carlsbad and Encinitas. To the east, city boundaries are less clear, as a mix of hillsides and urban development are located adjacent to the cities of Vista and San Marcos and unincorporated county lands. The city’s regional location is depicted in Figure 1.2-1: Regional Setting.

From the city’s incorporation in 1952 and for many years after, Carlsbad existed as a “quaint village-by-the-sea.”¹ In 1952, the city consisted of about 7.5 square miles centered on the Village. Figure 1.2-2: City Evolution shows that over time a series of annexations gradually expanded the city’s land area south and east to its current size of 39 square miles. The Village, once the heart of the community, is now at the city’s northwest corner, almost a 10-mile drive from the city’s southeastern edge.

As a relatively young city, much of Carlsbad’s economic growth can be traced back to the city’s proactive planning efforts to attract and develop Plaza Camino Real and Car Country Carlsbad in the late 1960s and early 1970s. Both have served as regional retail centers for North San Diego County. Sales in apparel and automobiles reaffirm the importance of Plaza Camino Real and Car Country Carlsbad as regional assets to the city’s economic base. Given Carlsbad’s

¹ City of Carlsbad, General Plan 1994.

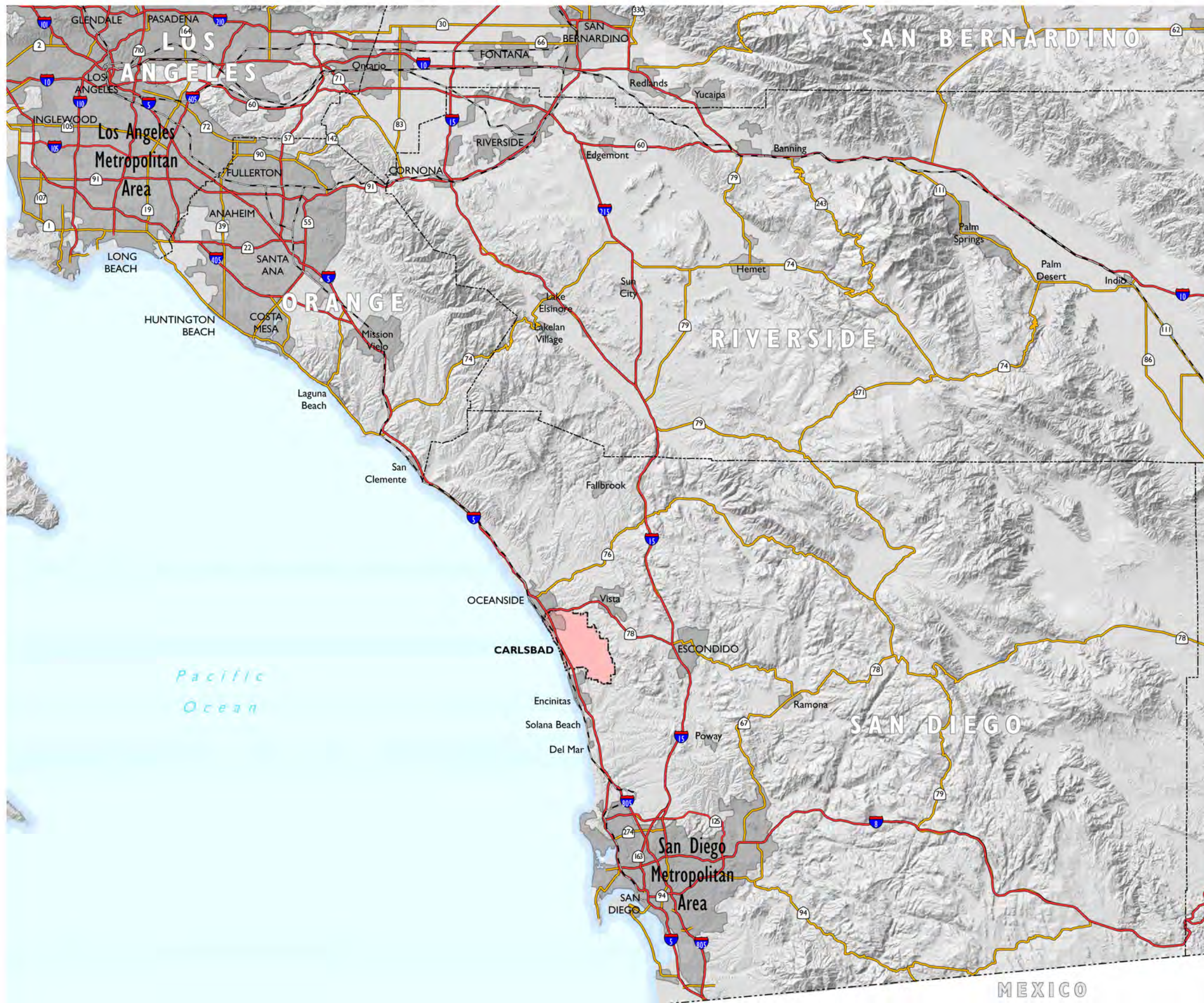
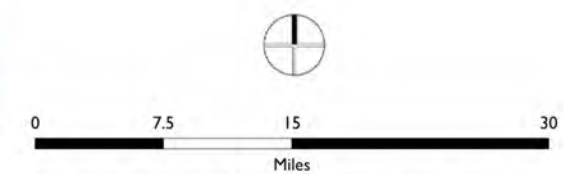


Figure 1.2-1: Regional Setting

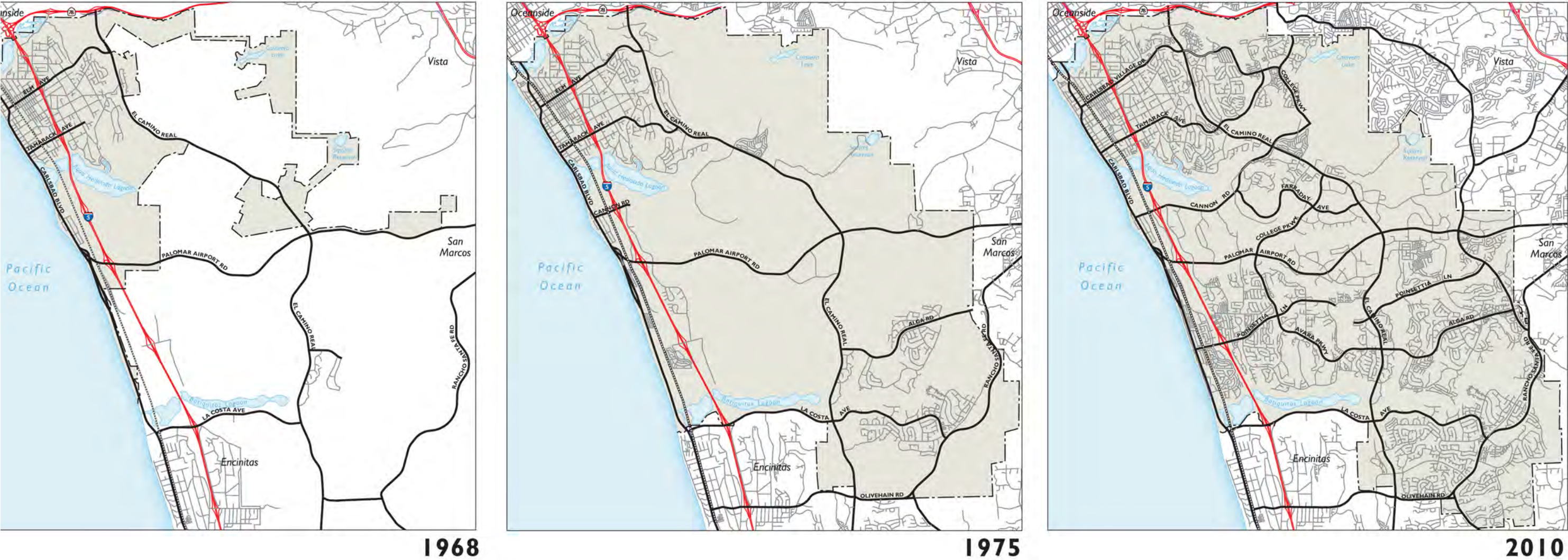
- Carlsbad City Limits
- Urban Areas*
- County Lines
- Interstates
- Highways & Major Roads
- Passenger Rail Lines

*The urban areas data provided by ESRI does not depict city limits. Its purpose is to show the general areas of higher population and should be regarded as an illustrative feature on the map.

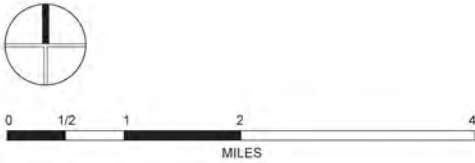


Source: ESRI, 2009; City of Carlsbad, 2009; SANDAG, 2008; USGS, 2002; Dyett & Bhatia, 2011.

Figure 1.2-2: City Evolution



Carlsbad City Limits



Source: USGS 7.5 Minute Quads, San Luis Rey, San Marcos, Encinitas, Rancho Santa Fe, 1968, 1975; City of Carlsbad, 2009; Dyett & Bhatia, 2010.

rapid economic growth and development in the 1980s, city leaders and residents took measures in 1986 to proactively manage the city’s growth, fiscal health and levels of service by passing Proposition E, which established the City of Carlsbad Growth Management Plan. The Growth Management Plan limits the total number of residential dwelling units in the city to 54,599. Other planning efforts include the preparation of the Village Master Plan which established a vision for the future character and development of the Village, the Ponto Beachfront Village Vision Plan which establishes a blueprint for development of the Ponto neighborhood, and other redevelopment efforts focusing on the Ponto Beach and Power Plant areas. In 2008, Carlsbad residents voted to approve Proposition D, where Carlsbad is now governed by its own charter document.

Work Completed

During the first task in this second phase of Envision Carlsbad, existing conditions and issues were evaluated. This evaluation was presented in six working papers, structured around the core values identified in the Carlsbad Community Vision. The working papers provide background information and technical analysis that will be relied upon for subsequent tasks. They also raised policy issues (presented at the end of each working paper) to help the Envision Carlsbad Citizens’ Committee (EC3) brainstorm how these issues may shape potential alternatives or policies. Copies of these working papers may be found on the Envision Carlsbad website: www.carlsbadca.gov/envision

The six working papers focus on the following community core values:

- 1. Sustainability
- 2. The Local Economy, Business Diversity and Tourism
- 3. Open Space and the Natural Environment; Access to Recreation and Active, Healthy Lifestyles
- 4. History, the Arts and Cultural Resources; High Quality Education and Community Services
- 5. Walking, Biking, Public Transportation and Connectivity
- 6. Small Town Feel, Beach Community Character and Connectedness; Neighborhood Revitalization, Community Design and Livability

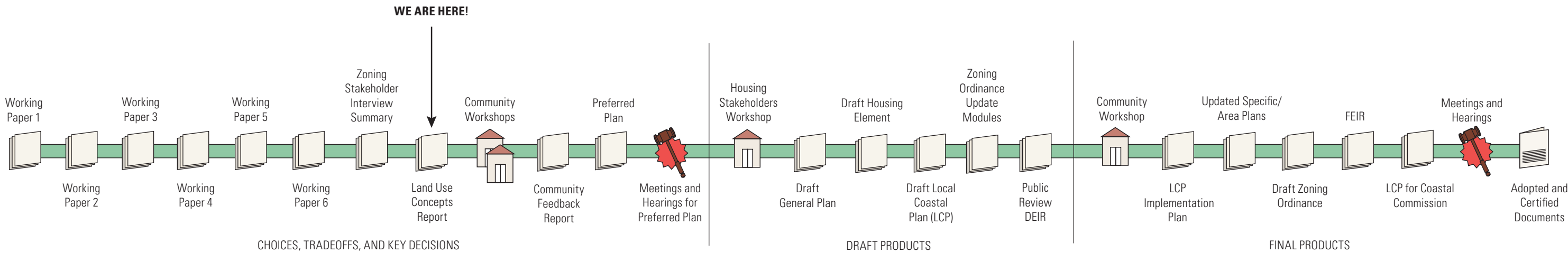
Public participation lies at the heart of the Envision Carlsbad process. During each phase of the process, community members and stakeholders are being asked for ideas and input through a variety of methods, including:

- Public workshops and meetings;
- Envision Carlsbad Citizens’ Committee;
- Workshops with the City Council and Planning Commission;
- Project website at www.carlsbadca.gov/envision
- Newsletters, videos and media coverage; and
- Public opinion survey.

Next Steps

The land use concepts evaluation process relies heavily on public input. Two workshops will be held and an online survey will be available to provide opportunities for Carlsbad residents, businesses, and institutions to provide opinions on the concepts. The Envision Carlsbad Citizens’ Committee and decision-makers will also consider the concepts in upcoming meetings. Following feedback on the land use concepts, a Preferred Plan will be developed that will likely consist of the land use options found to be most desirable by the community, infused with new ideas generated during public discussions. The Preferred Plan will consist of several detailed plan components, including land use and circulation, which will be incorporated into the draft General Plan. Figure 1.2-3: Work Program Summary shows a generalized program for this second part of the Envision Carlsbad process. A detailed work program may be found on the Envision Carlsbad website: www.carlsbadca.gov/envision

Figure 1.2-3: Work Program Summary



1.3 Community Vision

The Carlsbad Community Vision reflects the community’s aspirations for Carlsbad’s future. It is a clear and motivational summary of the vision expressed by community members during the first phase of Envision Carlsbad. The Carlsbad Community Vision is based upon nine core values that were commonly expressed by the community. These values represent the qualities and characteristics of Carlsbad that community members aspire to protect, maintain, improve, change or achieve in the future.

The Vision

CORE VALUE	VISION STATEMENT
Small Town Feel, Beach Community Character, and Connectedness	<i>Enhance Carlsbad’s defining attributes—its small town feel and beach community character. Build on the city’s culture of civic engagement, volunteerism, and philanthropy.</i>
Open Space and the Natural Environment	<i>Prioritize protection and enhancement of open space and the natural environment. Support and protect Carlsbad’s unique open space and agricultural heritage.</i>
Access to Recreation and Active, Healthy Lifestyles	<i>Promote active lifestyles and community health by furthering access to trails, parks, beaches, and other recreation opportunities.</i>
The Local Economy, Business Diversity, and Tourism	<i>Strengthen the city’s strong and diverse economy and its position as an employment hub in North San Diego County. Promote business diversity, increased specialty retail and dining opportunities, and Carlsbad’s tourism.</i>
Walking, Biking, Public Transportation and Connectivity	<i>Increase travel options through enhanced walking, bicycling, and public transportation systems. Enhance mobility through increased connectivity and intelligent transportation management.</i>

CORE VALUE	VISION STATEMENT
Sustainability	<i>Build on the City’s sustainability initiatives to emerge as a leader in green development and sustainability. Pursue public/private partnerships, particularly on sustainable water, energy, recycling, and foods.</i>
History, the Arts, and Cultural Resources	<i>Emphasize the arts by promoting a multitude of events and productions year-round, cutting-edge venues to host world-class performances, and celebrate Carlsbad’s cultural heritage in dedicated facilities and programs.</i>
High Quality Education and Community Services	<i>Support quality, comprehensive education and life-long learning opportunities, provide housing and community services for a changing population, and maintain a high standard for citywide public safety.</i>
Neighborhood Revitalization Community Design, and Livability	<i>Revitalize neighborhoods and enhance citywide community design and livability. Promote a greater mix of uses citywide, more activities along the coastline, and link density to public transportation. Revitalize the Village as a community focal point and a unique and memorable center for visitors, and rejuvenate the historic Barrio neighborhood.</i>

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A Snapshot of the City

2.1 Existing Land Use Pattern

The following section describes the range of existing land uses in the city and the character of development.

Existing Uses

The geographically dominant land use in Carlsbad is single-family residential, with neighborhoods distributed throughout the city. Residential uses account for 31 percent of the city's land area (exclusive of local streets), as shown in Table 2.1-1, with the largest share attributed to single-family homes. According to the San Diego Association of Governments (SANDAG), there are 43,496 residential units in the city, which consist of 29,390 single-family homes (68 percent of total), 12,807 multi-family units (29 percent of total) and 1,299 mobile homes (3 percent of total).¹

Non-residential uses, including commercial, industrial and hotels, account for 10 percent of the city's land area. Commercial and industrial uses are primarily concentrated along Palomar Airport Road. As shown in Table 2.1-2, and according to Colliers International (2nd quarter of 2010), there are 14.9 million square feet of industrial and research and development/flex space and 5.6 million square feet of office space. Notably, as of mid-2010, vacancy rates were relatively high at 14.6 percent (industrial) and 29.3 percent (research and development/flex space). Hotels, which make up 1 percent of Carlsbad's land area, are scattered throughout the city, taking advantage of freeway access, the airport and proximity to major activity and employment centers, including Legoland, beaches, golf courses, the Village and business parks. Public and quasi-public uses, including city buildings and utilities, account for 5 percent of the city's total acreage.

Although the coastal portions of Carlsbad are largely developed, natural vegetation remains in and around the three coastal lagoons and on the higher, steeper-sloped, inland portions of the city. Ten percent of the city's land area is used for parks and recreation, 4 percent for agriculture and 33 percent as other open space or natural areas. Finally, the remaining 6 percent of land is undeveloped or vacant. Although some of the vacant land may be available for development, some sections may not be developable due to site constraints, such as steep slopes or natural habitat that is protected pursuant to the city's Habitat Management Plan.

A more detailed discussion regarding existing land use patterns may be found in Working Paper 6.



¹ SANDAG 2050 Regional Growth Forecast for City of Carlsbad, received from City of Carlsbad Planning Department by Dyett & Bhatia on July 14, 2011.

TABLE 2.1-1: EXISTING LAND USES		
LAND USE	ACRES	SHARE OF SUB TOTAL
Residential Total	6,796	32%
Rural Residential	87	<1%
Single Family Detached Residential	5,084	24%
Single Family Attached Residential	646	3%
Mobile Homes	180	1%
Multi-Family Residential	800	4%
Non-Residential Total	2,087	10%
Shopping Centers	131	1%
Hotel, Motel, Resort	223	1%
Commercial	309	1%
Office	270	1%
Industrial	1,154	5%
Public/Quasi-Public Total	1,069	5%
Transportation, Communication, Utilities	571	3%
Education/Institutional	497	2%
Agriculture/Open Space Total	10,089	47%
Agriculture	935	4%
Recreation	2,074	10%
Open Space	7,080	33%
Undeveloped/Under Construction Total	1,385	6%
Undeveloped/Vacant	1,341	6%
Under Construction	44	<1%
Subtotal	21,427	100%
Right of Ways	3,582	
Grand Total	25,009	
Notes:		
a. Numbers may not add up due to rounding.		
b. Planned land uses, such as open space, may differ than existing land uses shown in this table. In addition, some “undeveloped/vacant” land may be been developed since the date of SANDAG’s data, while some “under construction” may have been completed.		

Source: SANDAG, 2008; City of Carlsbad Planning Department, 2011; Dyett & Bhatia, 2012

TABLE 2.1-2: EXISTING INVENTORY OF RESIDENTIAL AND NON-RESIDENTIAL USES		
	UNITS/SQUARE FEET	VACANCY RATE (%)
Residential (Units)	43,496	8.0
Single-Family	29,390	7.1
Multi-Family ¹	12,807	9.8
Mobile Homes	1,299	9.9
Non-Residential (square feet/hotel rooms)	24,373,400	
Industrial and R&D/Flex Inventory	14,910,100	14.6
Office-Inventory	5,622,700	29.3
Retail	3,840,600	4.7
Hotel Rooms	3,600	n/a
1. Includes assisted living/professional care facilities.		

Source: Residential: SANDAG 2050 Regional Growth Forecast for City of Carlsbad, received from City of Carlsbad Planning Department by Dyett & Bhatia on July 14, 2011. Non-Residential: Colliers International (Q2 2010) and City of Carlsbad Planning Department (Working Paper 6).

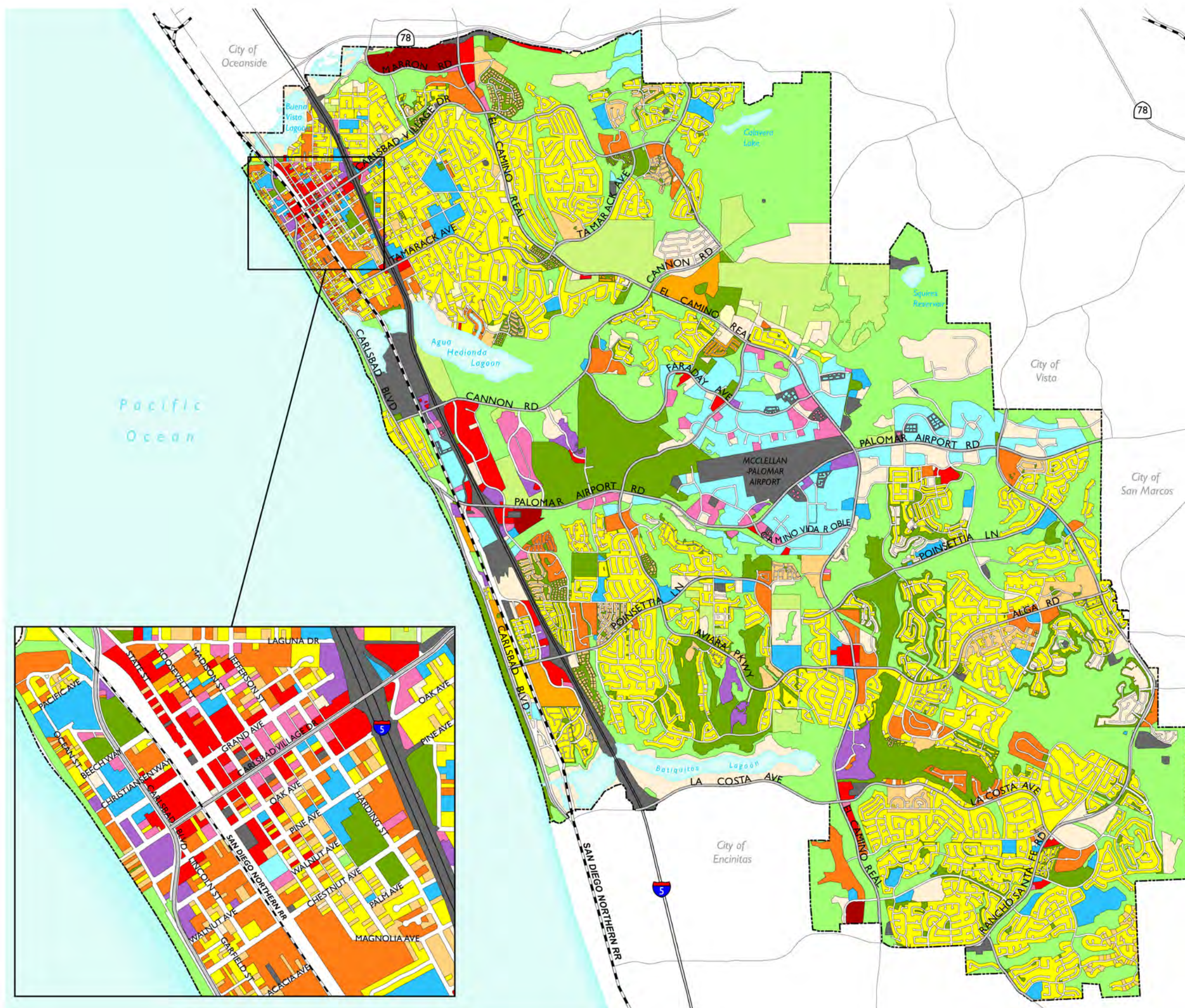
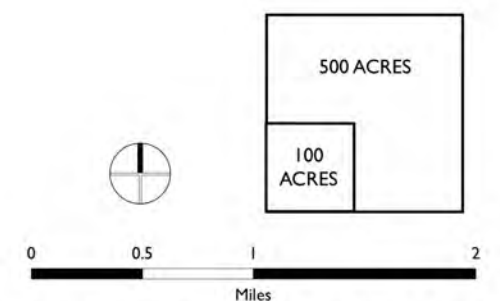


Figure 2.1-1: Existing Land Uses



Source: City of Carlsbad, 2009; SANDAG, 2008; Dyett & Bhatia, 2011.

2.2 Circulation and Connectivity

The following section describes the circulation system within the city, including the roadway, transit and bicycle system. This presents an overall view of the current and planned infrastructure to support walking, bicycling, using public transit and driving in Carlsbad and provides context to evaluate the land use concepts based on the “walking, biking, public transportation and connectivity” core value in the Carlsbad Community Vision. A comparative analysis of the land use concepts in regards to circulation and connectivity is located in Section 5.8.

Roadway System

The current General Plan classifies the roadway network within Carlsbad by the following facility types: freeways, prime arterials, major arterials, secondary arterials and a network of collector and local streets. Figure 2.2-1 shows the classification of major roadways within the city.

Freeways

Freeway facilities are high-volume/high-speed roadways with access occurring only at grade-separated interchanges. Interstate 5 extends along a north-south alignment through the city. North of the city, Interstate 5 continues through North San Diego County and Orange County, and provides access further north. South of the city, Interstate 5 provides access to other coastal cities in San Diego County, the City of San Diego and the South Bay, reaching the Mexican border at the southern edge of San Diego County. State Route 78 extends east-west, from Interstate 15 to Interstate 5.

Prime Arterials

Carlsbad contains a network of prime arterials traveling both north-south and east-west. These prime arterials generally have six travel lanes and are designed to carry very high volumes of traffic while providing access to adjacent properties when alternatives for access are unavailable. The prime arterials within the city include Palomar Airport Road, El Camino Real, Melrose Drive, Rancho Santa Fe Road and Olivenhain Road.

Major Arterials

Major arterials are generally four-lane roadways that supplement the prime arterials. These roadways are designed to carry moderate to heavy traffic while also providing access to adjacent properties when alternatives are unavailable. Some of the major arterials in Carlsbad include Carlsbad Boulevard, Cannon Road, Poinsettia Lane, Alga Road, Camino Junipero and College Boulevard. Portions of Carlsbad Village Drive and La Costa Avenue are also classified as major arterials.

Secondary Arterials

Secondary arterials are generally two to four-lane roadways that supplement the prime and major arterials. These roadways are designed to carry moderate levels of traffic while also providing access to adjacent properties. Some of the secondary arterials in the city include Marron Road, Paseo Del Norte, Avenida Encinas, Aviara Parkway, Alicante Road, El Fuerte Street, Camino De Los Coches and Calle Barcelona. Portions of Carlsbad Village Drive, Faraday Avenue, Tamarack Avenue and La Costa Avenue are also classified as secondary arterials.

Collector Streets

Collector streets provide connections between the arterial system and local streets that generally provide direct access to adjacent properties. Examples of collector streets include portions of Tamarack and Faraday avenues.

Planned Roadway System Improvements

There are several planned improvements to the city’s roadway network. The Circulation Element of the current General Plan includes completion of the city’s roadway network, with inclusion of the following new or improved roadway segments (though construction is contingent on funding being allocated and upon completion of environmental analysis pursuant to the California Environmental Quality Act [CEQA]):

- **Cannon Road.** Cannon Road is an existing east-west major arterial running between Carlsbad Boulevard and College Boulevard, with an unconstructed segment east of College Boulevard. The Circulation Element identifies the extension of this major arterial to the eastern city limit.
- **College Boulevard.** College Boulevard is an existing north-south major arterial running between the northern city limit and Palomar Airport Road, with an unconstructed segment between Cannon Road and El Camino Real. The Circulation Element identifies the extension of College Boulevard between Cannon Road and El Camino Real.
- **Poinsettia Lane.** Poinsettia Lane is an existing east-west major arterial running between Carlsbad Boulevard and Melrose Drive, with an unconstructed segment west of El Camino Real. Additionally, the segment of Poinsettia Lane between Aviara Parkway and Black Rail Road is not constructed to its ultimate configuration. The Circulation Element identifies the extension of Poinsettia Lane to complete the missing segments.
- **Camino Junipero.** Camino Junipero is an existing east-west major arterial beginning at Rancho Santa Fe Road and nearly reaching the eastern city limit. The Circulation Element identifies this major arterial extending to the eastern city limit.
- **Marron Road.** Marron Road is an existing east-west secondary arterial running between Jefferson Street and Avenida De Anita, with an unconstructed segment between Avenida De Anita and the eastern city limit. The Circulation Element identifies the extension of this secondary arterial to the eastern city limit.

Other future roadway improvements include the Carlsbad Boulevard realignment project and property exchange with the State Parks Department. In July of 2000, the City of Carlsbad together with the Carlsbad Housing and Redevelopment Commission adopted the South Carlsbad Coastal Redevelopment Area (SCCRA) Plan. One of the goals set forth within the SCCRA Plan is to provide funding for the realignment of Carlsbad Boulevard which has the potential to yield excess property that could facilitate the expansion of uses—primarily open space and recreational—along the waterfront. It is anticipated that the realignment project will include a promenade or similar space along the west side of southbound Carlsbad Blvd. The promenade might include, but is not limited to, landscaping, public art, park furniture, trash containers, lighting, water fountains, bicycle racks, etc.

These planned roadway improvements are shown in the context of each land use concept in Figures 4.2-1, 4.3-1, and 4.4-1 in Chapter 4.

Transit

North County Transit District (Bus Service)

Fixed-route public transportation service in Carlsbad, consisting of bus and rail, is provided by the North County Transit District (NCTD). Figure 2.2-2 illustrates the existing public transit routes serving Carlsbad.

System-wide, NCTD operates a total of eight BREEZE Transit Centers, with two located in Carlsbad: Carlsbad Village Station and Plaza Camino Real. The Carlsbad Village Station Transit Center includes six bus bays and serves three NCTD routes (Routes 101, 321, and 325). The Plaza Camino Real Transit Center is located at the Plaza Camino Real shopping center and includes eight bus bays and serves three NCTD routes (Routes 302, 309, and 325). Both transit centers provide sheltered seating and information on transit services through informational signs and posters.

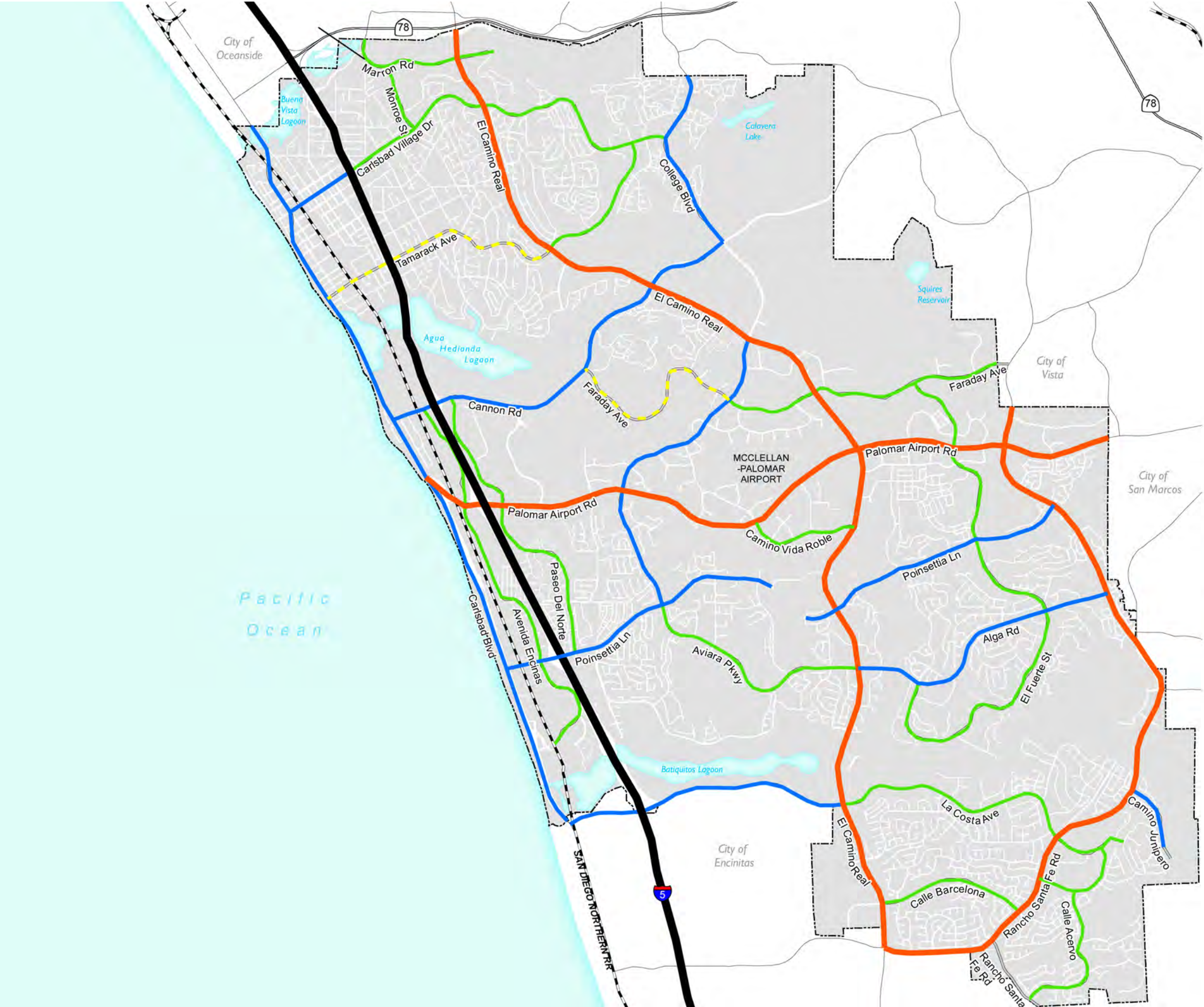
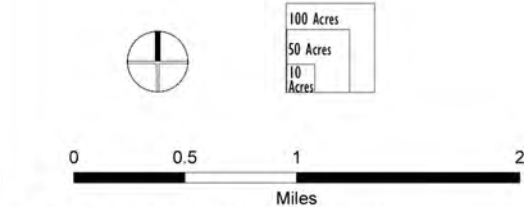


Figure 2.2-1: Existing Road Classifications

- Railroad
- City Limits
- Road Classifications**
 - Freeway
 - Prime Arterial
 - Major Arterial
 - Secondary Arterial
 - Collector



Source: City of Carlsbad, 2009; SANDAG, 2008; Dyett & Bhatia, 2009; Fehr & Peers, 2010

Figure 2.2-2: Existing Regional and Local Transit Routes

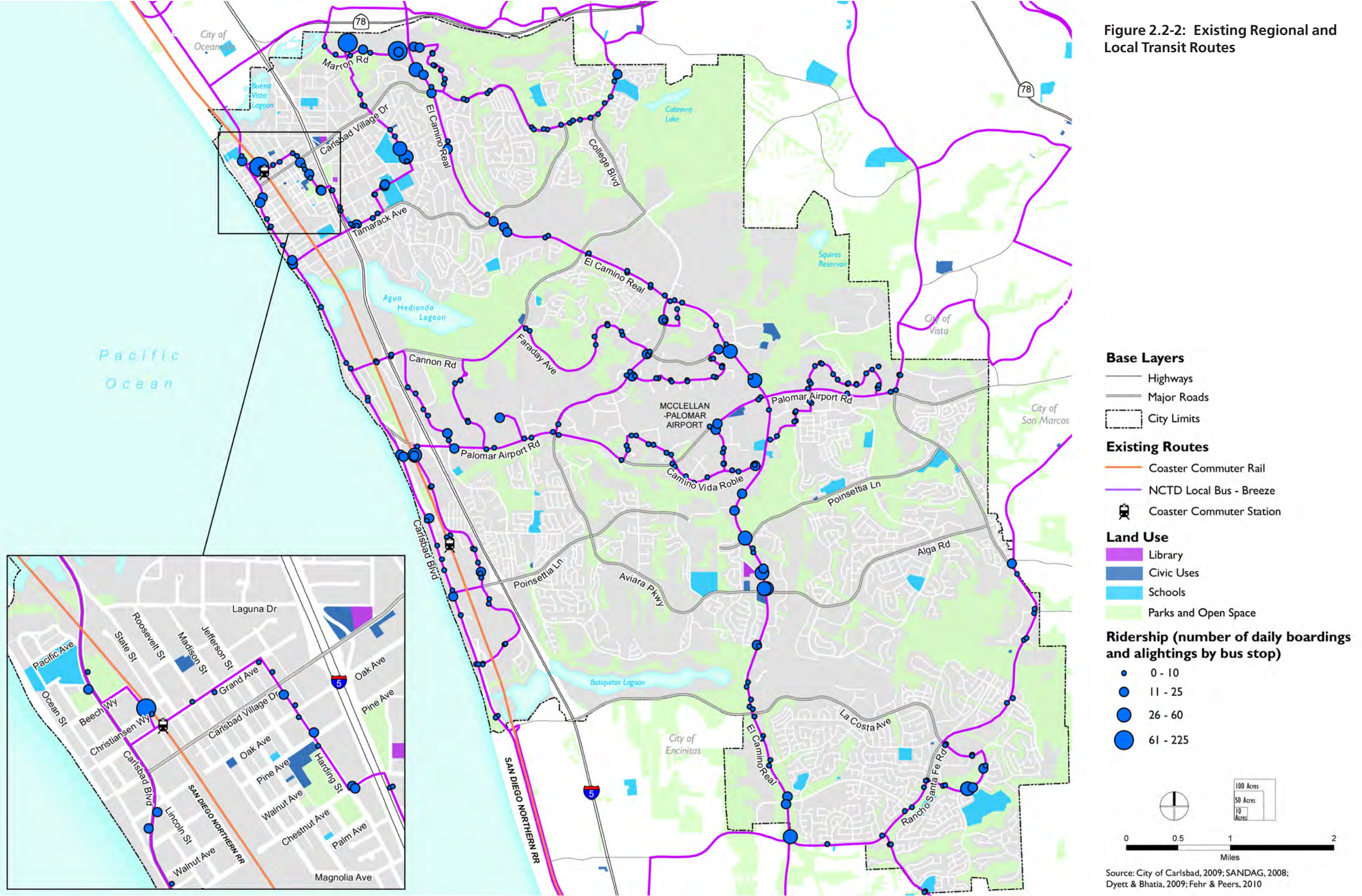
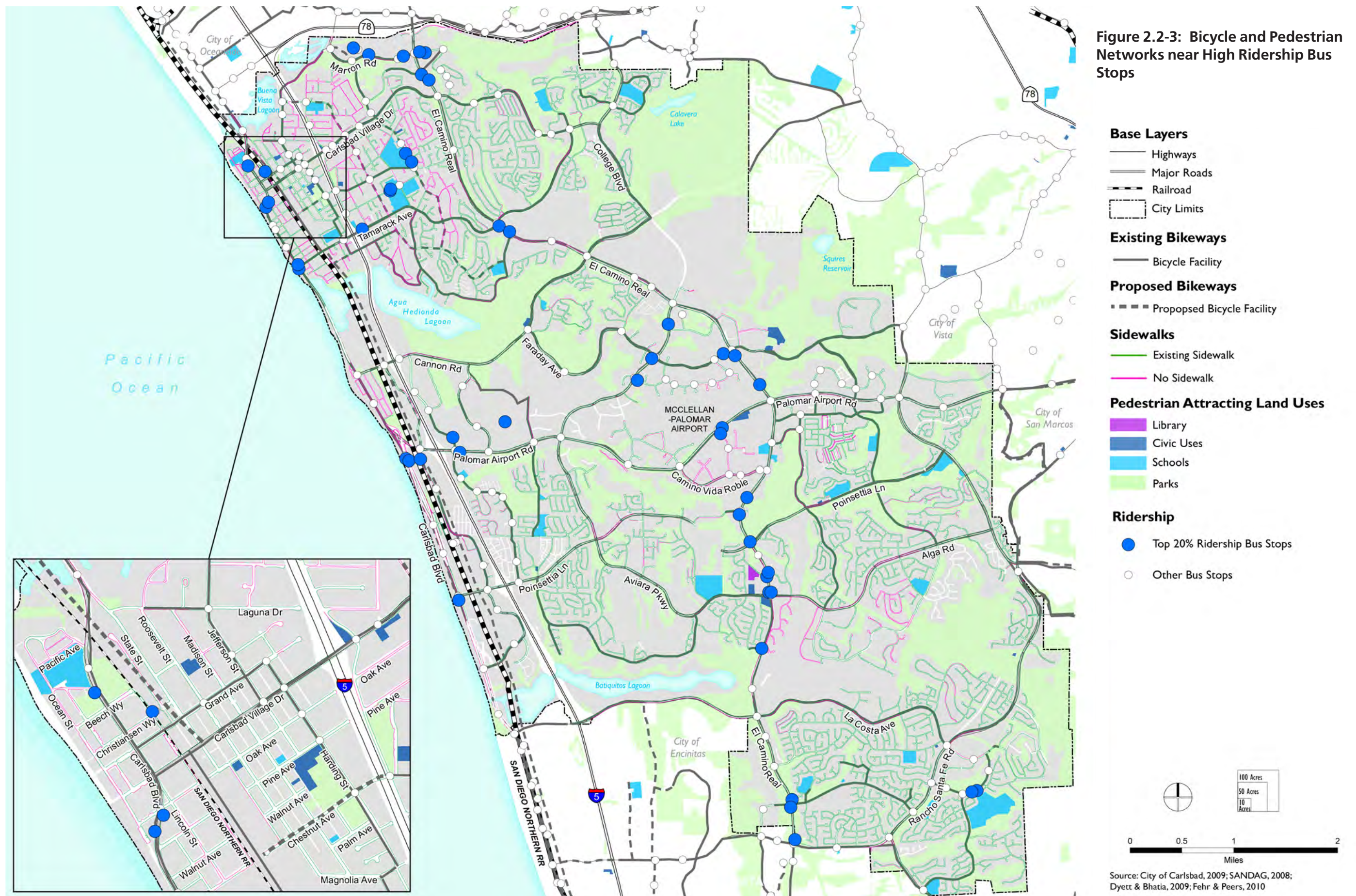


Figure 2.2-3: Bicycle and Pedestrian Networks near High Ridership Bus Stops



NCTD is preparing a Mobility Plan which includes a comprehensive study of their service, with the objective of developing an improved transit network in partnership with local communities. Specific elements of this study include examination of resident and rider demographics, major origins, destinations, connections, and evaluation of existing bus route performance. Potential changes to NCTD service such as route or fair restructuring would result in an enhanced NCTD experience for all users. For more information on this Mobility Plan, please visit: www.nctdmp.tmdinc.net/info01.htm.

An enhanced transit system that better serves travel patterns and area residents with improved system efficiency and service would likely increase the viability of utilizing transit for a wider variety of trip purposes. NCTD has stated an objective of achieving greater coordination in municipal planning efforts such as bus routing and local land use decisions. The General Plan update provides an opportunity to develop and implement transit goals that can work in concert with the efforts underway at NCTD to better serve residents of Carlsbad.

COASTER Commuter Rail

The COASTER is a north-south commuter rail transit service connecting San Diego with North County six days a week. Each COASTER train has a capacity exceeding 1,000 passengers and provides access to a number of regional coastal destinations including downtown San Diego, Old Town San Diego, Sorrento Valley, Solana Beach, Encinitas, and Oceanside. System-wide, the COASTER currently serves approximately 4,700 passengers on a typical weekday and 1,800 passengers on a typical Saturday. Weekday peak period service frequencies are approximately 30 minutes, with mid-day service frequencies of approximately 90 minutes. Carlsbad is served by two COASTER stations, one located north of Poinsettia Lane and the other located at Carlsbad Village Drive. Each COASTER station includes parking, platform boarding areas, ticketing machines, sheltered seating, and other amenities such as shade and trash receptacles.

Poinsettia Station

The Poinsettia COASTER Station is located on Avenida Encinas, north of Poinsettia Lane. This station is predominantly surrounded by residential and open space land uses. The Poinsettia Station is served by NCTD Routes 444 and 445, and includes several bus bays. Another bus stop is located on Carlsbad Boulevard, approximately one-quarter mile walking distance. The Poinsettia Station includes approximately 320 parking spaces.

Carlsbad Village Station

The Carlsbad Village COASTER Station is located on State Street, north of Grand Avenue. This station is surrounded by a variety of land uses including residential, shopping centers, restaurants and bars, hotels, offices, and open space. The Carlsbad Village Station is served by NCTD Routes 101, 321 and 325, and includes six bus bays with a bus stop located immediately west of the tracks along Washington Street. Another bus stop is located along Grand Avenue, at Roosevelt Street, within one-quarter mile walking distance. The Carlsbad Village Station includes approximately 420 parking spaces.

Planned Transit Improvements

The SANDAG 2050 Regional Transportation Plan (RTP) contains information regarding a number of proposed improvements to the transit network within Carlsbad. The “revenue constrained transit network” of the SANDAG 2050 RTP includes coastal rail improvements for tracks serving the COASTER and increased service and proposed rapid bus service along Palomar Airport Road, connecting McClellan Palomar Airport to San Diego International Airport. Improvements also include increased service along certain local bus routes with the goal of 15 minute service in key corridors.

Senate Bill 10 (SB 10), authored by Senator Christine Kehoe and passed in 2007, mandates that the San Diego County Regional Airport Authority, in collaboration with SANDAG, prepare a Regional Aviation Strategic Plan (RASP) to evaluate ways to optimize the public use airports in the region. SB 10 also requires the development of an Airport Multimodal Accessibility Plan (AMAP), an effort led by SANDAG and coordinated with the Airport Authority. Where the RASP will identify the airport infrastructure needed to meet future aviation demand, the AMAP will identify surface transportation infrastructure needs associated with future airport expansion. A draft of the San Diego AMAP was released for public review in June 2011. Recommended transit access improvements for the McClellan-Palomar Airport include modifying NCTD Route 445 to serve the airport terminal using the new Owens Avenue connection for more direct access to the terminal and the route modification would provide connectivity to COASTER service at the Carlsbad Poinsettia Station.

Bicycle Movement

The City of Carlsbad adopted a Bikeway Master Plan in 2007, which guides the future development of bikeways and enhancement of the city’s existing bikeway network. There are currently bicycle facilities on most major arterial roadways within the city, including Carlsbad Boulevard, Carlsbad Village Drive, El Camino Real, Palomar Airport Road and La Costa Avenue. Figure 2.2-3 displays the existing and proposed bicycle facilities in Carlsbad.

A majority of the roadways within the city currently include a bicycle facility of some type within its right-of-way. There are, however, several bicycle facility gaps at critical locations. In particular, bicycle lanes are discontinued along both Cannon Road and Palomar Airport Road, just east of Carlsbad Boulevard. These gaps greatly diminish connectivity to the coastline for cyclists.

Planned Bicycle Improvements

The city’s Bicycle Master Plan indicates a number of planned bicycle facilities, including the Coastal Rail Trail, the Carlsbad Boulevard Bike Path at Ponto, two Class II Bike Lane projects at Hillside Drive and Avenida Encinas, and five Class III Bike Route projects in the northwest quadrant of the city.

The proposed Coastal Rail Trail (30+ miles) located in the North County Transit District’s (NCTD) right-of-way will provide great opportunities for biking of all purposes. This trail will run along the eastern side of the railroad tracks through the coastal cities of Oceanside, Carlsbad, Encinitas, and Solana Beach in San Diego’s North County. A ¾-mile segment of the Coastal Rail Trail in Carlsbad was completed in 2005, connecting Tamarack Avenue with Oak Avenue.

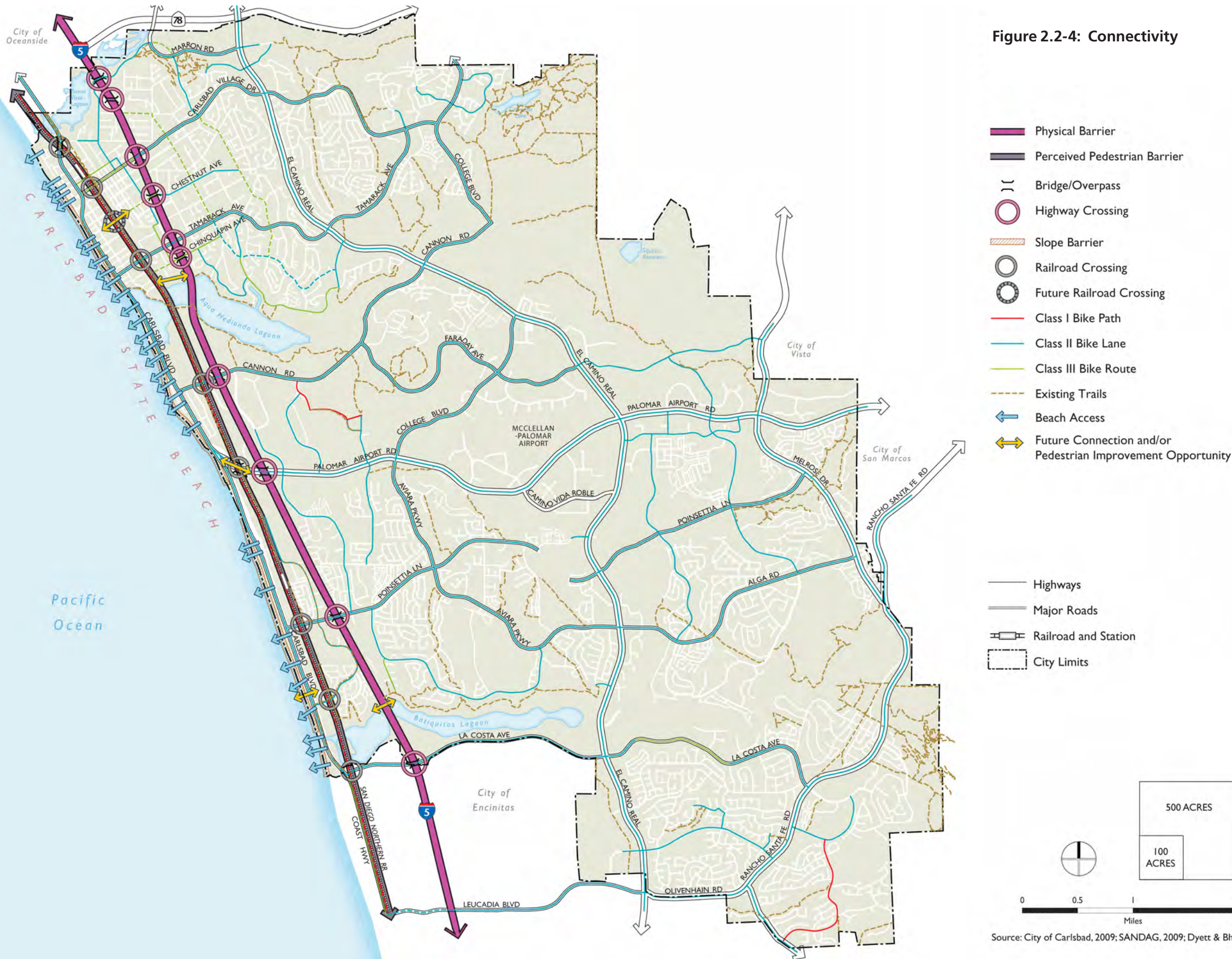
In addition, the Carlsbad Boulevard Bike Path at Ponto located on the western side of Carlsbad Boulevard (along the coast) between Palomar Airport Road and Poinsettia Lane, will provide residents of Carlsbad and visitors to South Carlsbad State Beach with a separated bike path.

Pedestrian, Bikeway and Transit Integration

A higher percentage of people are likely to use transit if they can walk to the station or bus stop, rather than driving cars to access transit. Good pedestrian and bicycle access is a key parameter in measuring the accessibility of the local transit facilities. Figure 2.2-3 displays locations of existing and missing sidewalks, existing and proposed bicycle facilities, and the various bus stop locations falling within the top 20 percent of current ridership activity within Carlsbad.

As shown, the busiest transit stops are located along the major streets with good pedestrian connectivity via sidewalks. While missing and incomplete sidewalks are problematic, it is the lack of a well-connected underlying roadway grid network that tends to form the most significant barrier to pedestrians. Missing sidewalks tend to be more common along smaller streets often within lower density residential areas which also lack through street connectivity. Pedestrian access along major roadways is generally good with adjacent sidewalks and crossing connections provided via

Figure 2.2-4: Connectivity



marked crossings at signalized intersections. Some of the potential barriers to pedestrians accessing local transit facilities include:

- Missing sidewalks near bus stops, schools and parks
- Long distances between marked pedestrian crossings discourage pedestrians who must go out of their way to utilize a marked crossing

The major transit stops in Carlsbad are generally well served by existing bicycle facilities. All but a handful of the busiest transit stops are located on roadways with existing bicycle facilities. A number of bus stop locations in the northwest area of Carlsbad are along roadways currently without bicycle facilities. Bicycle facilities, however, are proposed for several streets in this area as per the city's adopted Bicycle Master Plan, including:

- Chestnut Avenue
- Highland Drive
- Monroe Street
- Coastal Rail Trail

Connectivity

One of the core values identified in the Carlsbad Community Vision is the “small town feel, beach community character and connectedness.” In a small town, one would expect to be able to walk everywhere. Moreover, in a small “beach” town, residents would expect to be able to walk to the beach. In Carlsbad, a simple walk to the beach is only available to residents that live along the coastline; the remaining majority of Carlsbad residents must access the beach by car, reducing connectedness among community members and potential interactions among neighbors and friends. With the city's natural topography and physical barriers created by I-5, the railroad, and the three lagoons, this access is limited even for drivers. These connections and constraints are illustrated in Figure 2.2-4.

Detailed discussion regarding the circulation system may be found in Working Paper 5, with additional analysis of beach access and connectivity in Working Paper 6.

2.3 Open Space, Parks & Recreation

This presents an overall view of the current and planned open space and park areas in Carlsbad and provides context to evaluate the land use concepts based on the “open space and natural environment” core value identified in the Carlsbad Community Vision. A comparative analysis of the land use concepts in regards to open space and parks is located in Section 5.5 and supplemented by an analysis of park access in Section 5.7.

Open Space

Carlsbad is situated along the Pacific Coast. Elevations range from sea level along the coast to about 1,000 feet above mean sea level at the southeastern border of the city. Land within the city's jurisdiction covers about 42 square miles (26,880 acres), about 38 percent of which the city currently classifies as open space. About 77 percent of that open space consists of natural open space such as native habitats, lagoons and streams. Other lands classified by the city as open space include agricultural lands, recreation areas and open space for aesthetic, cultural and educational purposes.

The city's open space network boasts three lagoons, nearly 45 miles of hiking trails, and almost seven miles of coastline, as well as unique agricultural and horticultural resources such as the strawberry fields grown by the Carlsbad Strawberry Company and the Flower Fields. Carlsbad is unique in its conservation goals for 40 percent of the city in open space. Other cities in North San Diego County have goals for open space in the 12 to 15 percent range.

Prior to the adoption of the city's Growth Management Plan (1986), the Carlsbad General Plan designated and preserved 25 percent of the city as open space for protection of environmentally significant land and sensitive habitat. The Growth Management Plan required all development (after 1986) to designate 15 percent of the project land area as permanent open space (exclusive of environmentally constrained non-developable land) except in areas of the city already developed (Local Facility Management Zones 1 through 10, and 16). When the open space required by the city's General Plan is combined with the additional open space required by the Growth Management Plan, and properties protected by the city's Habitat Management Plan, it is estimated that the amount of open space in the city at build-out will be 40 percent of the total city area. Figure 2.3-1 shows the open space within the City of Carlsbad.

Several plans and programs are in place to enhance open space in the community:

Multiple Habitat Conservation Program

Under the California Natural Community Conservation Program, the City of Carlsbad and six other cities in northern San Diego County participated in the preparation of the Multiple Habitat Conservation Program (MHCP), which was adopted and certified by the San Diego Association of Governments (SANDAG) Board of Directors in March 2003. The MHCP is a comprehensive subregional plan that addresses the needs of multiple plant and animal species in northwestern San Diego County and encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach and Vista. The intent is that these jurisdictions will implement their respective portions of the MHCP through citywide subarea plans, which describe the specific implementing mechanisms each city will institute for the MHCP.

Habitat Management Plan for Natural Communities in the City of Carlsbad

The City of Carlsbad prepared a subarea plan as a part of the MHCP, called the “Habitat Management Plan for Natural Communities in the City of Carlsbad” (HMP), which was adopted by the Carlsbad City Council in November 2004. The HMP outlines specific conservation, management, facility siting, land use, and other measures that the city will take to preserve the diversity of habitat and protect sensitive biological resources in the city while also allowing for additional development and growth as anticipated under the city's General Plan. Formal approval and adoption of the HMP occurred through issuance of a permit by the wildlife agencies, namely U.S. Fish and Wildlife Service (FWS)

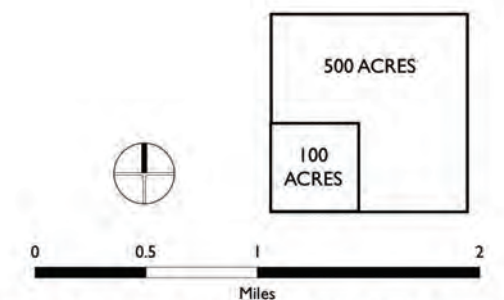


Figure 2.3-1: Open Space

- 1 Open Space for Preservation of Natural Resources
- 2 Open Space for Managed Production of Resources
- 3 Open Space for Outdoor Recreation
- 4 Open Space for Aesthetic, Cultural and Education Purposes

Recent Open Space Acquisitions

- Highways
- Major Roads
- Railroad
- City Limits



Source: City of Carlsbad, 2010; SANDAG, 2008; Dyett & Bhatia, 2010.

and California Department of Fish and Game (CDFG), as well as execution of an implementation agreement between the city and the wildlife agencies. To date, Carlsbad’s HMP is the only adopted subarea plan in the MHCP subregion.

The HMP preserve contains natural habitats that are necessary to sustain threatened, listed or sensitive species, and to maintain biological value. According to the permit issued by the wildlife agencies, the HMP is required to establish a preserve of 6,478 acres of natural habitat (within the city’s jurisdictional boundary), as well as an additional 308 acres of “core area” habitat for the coastal California gnatcatcher (outside of the city’s jurisdiction).

Open Space Management Plan

As a framework plan to assist in the implementation of the HMP, the city’s Open Space Management Plan (OSMP) establishes procedures, standards, guidelines and conditions for long-term conservation and management of sensitive species and habitat. There are three additional categories of open space land in the OSMP that are dedicated as non-preserve uses in the HMP:

Other Natural Lands. These are lands that do not contribute significantly to the overall biological value, but continue to be managed as open space.

Developed Parks. This category includes existing parks as well as parks to be developed in the future.

Drainage Basins. The drainage basin parcels serve as an “overlay” because they are sometimes covered by other categories and may overlap with the HMP areas.

Open Space Conservation Resource Management Plan

The City of Carlsbad’s Open Space Conservation Resource Management Plan (OSCRMP) (1992) defines a program for implementation of an integrated open space system incorporating all types of General Plan open space, including natural habitats and trails.

Community Forest Management Plan

The Community Forest Management Plan (2000) provides guidance to conserve forest areas through proper design, maintenance and education. The document includes guidelines and procedures for planting, maintaining, removing, replacing and preserving trees within public areas.

Proposition C Open Space and Trails

In 2002, Proposition C was passed by Carlsbad voters, which authorized the City Council to exceed the \$1 million capital spending limit for specified projects, one of which was the acquisition of open space and trail linkages. The Proposition C Open Space and Trails Ad Hoc Citizens’ Committee was formed by the City Council in October 2005 to establish a prioritized list of potential property acquisitions associated with the open space and trails linkage component of Proposition C. Several conservation acquisitions of Prop C ranked properties have occurred to-date. The Sherman property was acquired by the California Department of Fish and Game (CDFG) and is now the CDFG’s Buena Vista Creek Ecological Reserve., The Mitsuchi property near Batiquitos Lagoon and two Caltrans properties near Agua Hedionda Lagoon have been acquired by SANDAG.

Agricultural Heritage/Proposition D

In November 2006, Proposition D—Preserve the Flower and Strawberry Fields and Save Tax Payers Money (Prop D)—amended the Carlsbad General Plan by designating an area of land for special consideration called “The Cannon Road Open Space, Farming and Public Use Corridor.” The Prop D areas consist of approximately 307 acres

of privately-owned lands, including the strawberry fields and the Flower Fields. The proposition placed a permanent open space designation on the lands to encourage continuation of agriculture as long as it is economically viable for the landowners. When agriculture is no longer economically viable, only other open space uses would be allowed on the lands. The Proposition specifically prohibits residential, commercial and industrial-type uses in the area other than those normally associated with farming operations and open space uses.

The city conducted a comprehensive planning and public participation process to determine the most appropriate use of the site, which is limited to open space, recreational and public uses. Based on the input received during that public participation process, the city adopted new regulations in the zoning ordinance to fully implement Proposition D. The new regulations are currently under review by the California Coastal Commission.

Lagoons and Lagoon Watersheds

Lagoons are a valuable part of the city’s open space network and provide various public benefits, such as hiking trails, scenic viewsheds, nature preserves, nature education, fishing and water recreation. There are three lagoons, totaling more than 1,000 acres, located within the city:

- **Buena Vista Lagoon.** Buena Vista Lagoon is a 350-acre fresh water lagoon managed by CDFG as a nature reserve. Located on the border between Carlsbad and Oceanside, it became California’s first ecological reserve in 1969.
- **Agua Hedionda Lagoon.** Agua Hedionda Lagoon consists of three inter-connected lagoons, divided by the I-5 freeway and a railroad bridge. Cabrillo Power LLG owns and manages the lagoon water body, which primarily provides cooling water for the electric producing generators at the Encina Power Plant. A portion along the eastern edge of the lagoon is protected by CDFG and designated as a Marine Protected Area under the Marine Life Protection Act. The Agua Hedionda Ecological Reserve was acquired in 2000 by the CDFG and consists of 186 acres of wetland at the eastern end of the lagoon.
- **Batiquitos Lagoon.** Batiquitos Lagoon consists of approximately 561 acres protected as a game sanctuary and bird estuary. The Batiquitos Lagoon is owned by both the CDFG and the California State Lands Commission.

Parks and Recreation Facilities

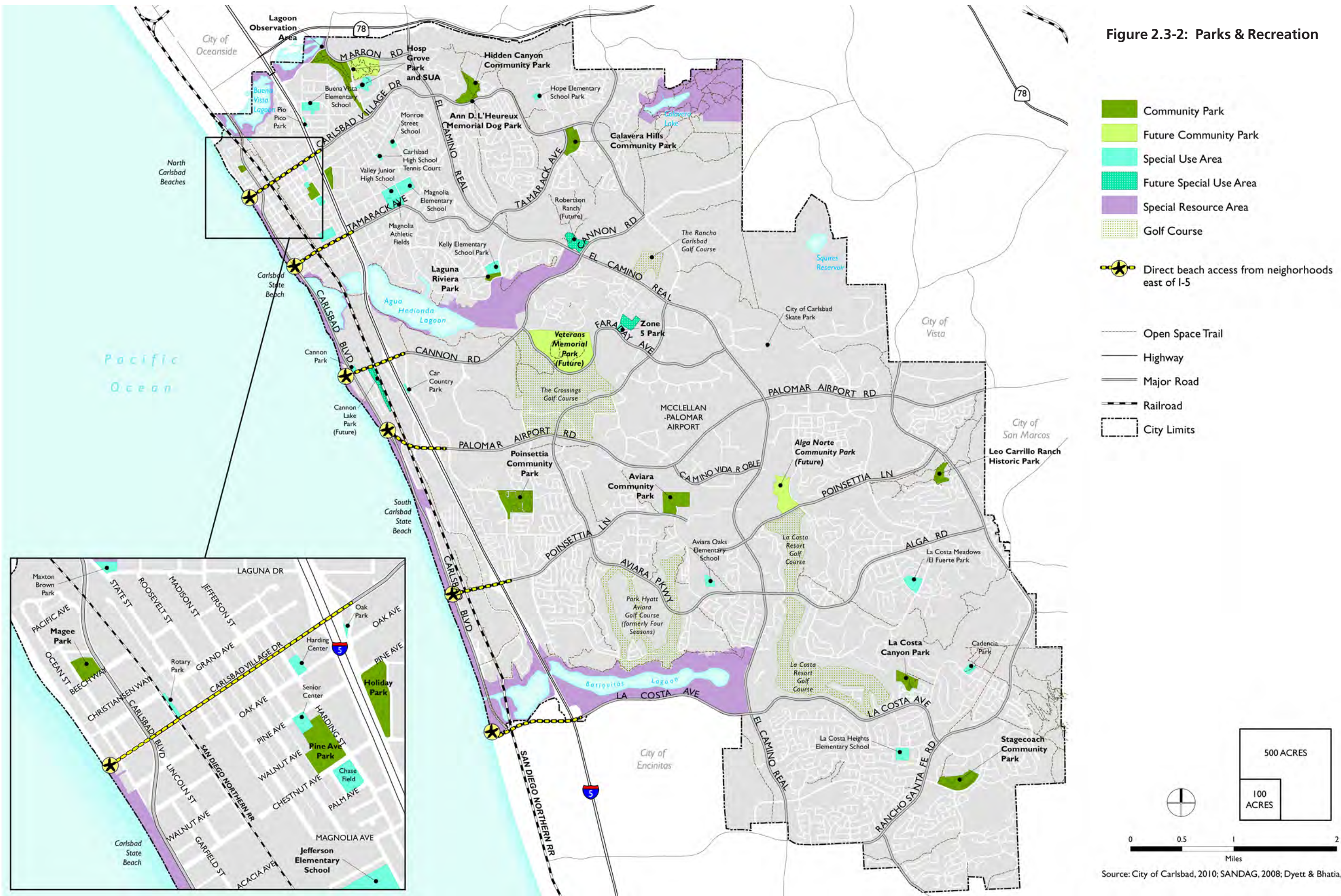
Park Classifications

Parks in the city are classified as follows:

- **Community Parks.** Community parks are approximately 20-50 acres in size (though some smaller parks have been “grandfathered” into this classification), and designed to serve the recreational needs of several neighborhoods, with a focus on serving families. Community parks are designed to be accessed primarily by vehicle, and are therefore typically located on or near an arterial roadway.
- **Special Use Areas.** Special use areas are typically between one and five acres in size, with only one or two basic uses, which can be either active or passive in orientation. Examples include, but are not limited to, skate parks, dog parks, tennis courts or picnic areas.
- **Special Resource Areas.** Special resource areas have citywide and potentially regional significance related to the quality of the site or service that it provides. This quality may be a natural feature (geological, ecological, hydrological), historical (architectural, archaeological), or some combination thereof. Special resource areas are typically larger than community parks. Three special resource areas (Lake Calavera, Agua Hedionda Lagoon, and Batiquitos Lagoon) are also designated regional open space parks.

Figure 2.3-2 shows the location of different parks within Carlsbad.

Figure 2.3-2: Parks & Recreation



Existing Parks Inventory

The City of Carlsbad currently has 12 community parks (221 acres), 25 special use areas (61 acres), and five special resource areas (more than 1,300 acres). Table 2.3-1 provides the approximate acreages of existing and future community parks, special use areas and special resource areas.

If combined, the standards for the different types of recreation resource areas (special resource areas, special use areas, and community parks) results in a parks standard of 5.5 acres per 1,000 population. Of this, 3.0 acres per 1,000 population are required of developers (to comply with growth management), while the city works to achieve the other 2.5 acres per 1,000 population on its own.

Planned Parks and Future Need

Planned New Parks

Several entirely new parks are already scheduled in order to meet identified needs in accordance with citywide growth management facilities standards. These include:

- Alga Norte Community Park. A community park on a 32-acre site in the southeast quadrant east of El Camino Real, bordered on the south by Poinsettia Lane and on the east by Alicante Road.
- Veterans Park is a community park planned for the northwest quadrant, north of Faraday Avenue just east of Cannon Road and across the street from portions of The Crossings at Carlsbad golf course. The city-owned site is approximately 100 acres, of which only about 30 is developable (however trails may be located throughout most of the 100 acres).
- Robertson Ranch. Robertson Ranch is a 13-acre special use area planned for the northeast quadrant on the north-east corner of El Camino Real and Cannon Road.

Future Park Need

Based on the city’s current growth management plan and park facility standard (3 acres per 1,000 population), the city estimates that at buildout the parkland demand will be 357 acres (citywide), assuming that the current city park standards are in place. The standards as well as land uses themselves will be examined as part of the General Plan update, so these numbers may change. Special resource areas need is not be discussed here because the city supply already vastly exceeds anticipated need based on current citywide standards. With 414 acres of funded and currently-planned parks (such as Alga Norte and Veterans), the city will meet its growth management parkland requirements based on current population projections. Furthermore, all concepts show some additional parkland within several focus areas to locate additional parkland close to where future population will reside.

Additional discussion regarding open space, and parks and recreation may be found in Working Paper 3.

TABLE 2.3-1: EXISTING AND FUTURE PARKS (ACRES)	
Community Parks	221.5
Special Use Areas	60.8
Special Resource Areas	1,305.2
Sub-Total Existing	1,587.5
Planned Future	414.0
Total Existing and Future	2,001.5
Note: Planned Future Parks includes parks whose development is underway or are planned for the future. These exclude proposals for new parks within focus areas in the three concepts.	

Source: Working Paper 3, 2011.

3

Looking Ahead

The land use concepts take into consideration a variety of factors, including community input, market demand, and development constraints and opportunities. The SANDAG population and employment projections shown below are provided for informational purposes regarding potential growth in Carlsbad. The market demand shows residential and non-residential demand while the land availability and development constraints section shows where the demand can be met given development constraints.

3.1 Growth Projections

Population and Employment Projections

Changes to Carlsbad’s population and employment over the next 25-30 years will be influenced by many factors, including regional growth, economic forces, local policies, and Carlsbad’s attractiveness to future residents and employers. Carlsbad’s 2008 population was 103,406 and SANDAG projects that the city will add 23,983 residents by 2040, bringing the population to 127,389. SANDAG projects that the greatest population increase will occur in the Northwest and Northeast quadrants of the city. Data for the year 2040 is presented because SANDAG does not provide projections for the year 2035.

In 2008, Carlsbad contained 61,999 jobs. SANDAG expects employment in Carlsbad to increase at a higher rate than population growth, projecting an annual increase of 0.8 percent, resulting in 83,528 jobs by 2040. SANDAG projects that the greatest employment increase will occur in the Northeast and Southeast quadrants of the city.

TABLE 3.1-1: POPULATION AND JOB GROWTH SCENARIOS								
	POPULATION				JOBS			
	2008	2040	2008-2040 CHANGE	ANNUAL GROWTH RATE	2008	2040	2008-2040 CHANGE	ANNUAL GROWTH RATE
NW	27,907	35,490	7,583	0.7%	35,850	40,825	4,975	0.4%
NE	14,868	21,629	6,761	1.0%	7,658	18,944	11,286	1.9%
SW	23,887	27,905	4,018	0.4%	14,182	15,969	1,787	0.3%
SE	36,744	42,365	5,621	0.4%	4,309	7,790	3,481	1.4%
Total	103,406	127,389	23,983	0.6%	61,999	83,528	21,529	0.8%

Source: SANDAG, 2011

Market Demand

Based on market analysis conducted for Envision Carlsbad (see Working Paper 2), net demand for residential units in 2035 is projected to be 5,270 units as shown in Table 3.1-2. Analysis indicates that residents 20 to 34 years of age with a greater preference for multifamily housing are projected to be the largest drivers of housing need during the next ten years. Based on tapestry segmentation profiles for these residents, future growth in demand for multifamily housing will focus on the city’s northwest quadrant, as younger, up-and-coming residents with growing wealth exhibit a growing preference for older, urban neighborhoods with an abundance of services, retail opportunities, and walking access to amenities, such as those offered in Carlsbad Village and the Barrio. Redevelopment potential of these areas will therefore be greatest during the next 10 years. From 2031 to 2041, a significant increase in residents 85 years of age or older will create a much greater demand during that timeframe for multifamily senior housing and assisted living facilities.

Approximately 63.6 percent of all employees in the city are employed in manufacturing/light industrial (30.2 percent) and research and development/business park/office (33.3 percent) uses. Working Paper 2 shows that under Constant Distribution and Decennial Shift in Distribution scenarios, through 2040, a forecasted demand of approximately 3.94 million to 4.37 million square feet of new manufacturing/light industrial and research and development/business park/office space is projected for Carlsbad.

Table 3.1-2 provides space demand projections for manufacturing/light industrial and research and development/business park/office uses based on a decennial shift in distribution scenario. Based on current trends in land costs in North San Diego County and Carlsbad’s traded job clusters, this scenario assumes a more realistic distribution of jobs and land, and that employment distribution and demand for building space and land by industry will increasingly shift over time toward a higher concentration of research and development/business park/office uses, and a lower concentration of manufacturing/light industrial uses.

Additional discussion of housing, and market and employment trends is contained in Working Paper 2.

TABLE 3.1-2: 2035 RESIDENTIAL AND NON-RESIDENTIAL DEMAND			
LAND USE	TOTAL 2035 DEMAND	PIPELINE DEVELOPMENT¹	NET 2035DEMAND
Residential (Units)	6,280	1,010	5,270
Industrial/R&D/Office (square feet)	3,295,000	1,117,000	2,179,000
Commercial/Retail (square feet)	917,000	380,000	537,000
Hotel (rooms)²	2,700	250	2,450
Public/Institutional	n/a	433,000	–
1. Pipeline includes development projects reported in Working Paper 6.			
2. Hotel 2035 demand not projected by market analysis. Hotel demand based on average increase of 500 – 600 rooms every 5 years, resulting in a 75% increase in hotel capacity over the next 25 years.			

Source: Rosenow Spevacek Group, Inc., 2011; Working Paper 2, 2011.

Development Projects

There are several development projects in the pipeline that may be constructed in the near term. The majority of these projects are residential, including large-scale developments, such as the approved Robertson Ranch Master Plan, with housing, commercial space and substantial open space, and the proposed Dos Colinas senior housing community. Development projects are summarized in Working Paper 6 and illustrated on Figure 3.2-1 in Section 3.2 of this report. These projects alone could add over 1,000 housing units, 250 hotel rooms, 294,000 square feet of office, 433,000 square feet of public/institutional, 823,000 square feet of industrial, and 380,000 square feet of retail development to the city.

3.2 Land Availability and Development Constraints

Opportunity Sites

With the city nearing “built out” and the preservation of open space a priority, undeveloped land available for development is limited. Vacant sites exist throughout the city, but many of these sites are small, irregular in shape, or otherwise constrained due to natural or physical features (such as steep slope) that render development infeasible. Therefore, much of the city’s future development will come from expanded development on sites with existing structures or redevelopment of sites and structures that come to the end of their useful life over the next 20 years.

Methodology

Sites that have the potential to accommodate Carlsbad’s future projected growth (opportunity sites) were classified into three categories: vacant, underutilized sites, and vacant or underutilized sites that are part of specific or master plan area (See Figure 3.2-1):

- Vacant sites contain no development or are used as surface parking lots
- Underutilized sites refer to sites that have some existing (and even recent) development that is low density and available for intensification; or existing structures that may be at the end of their useful life during the planning period and appropriate for redevelopment.
- Vacant or underutilized sites that lie within approved master or specific plan areas may be developed consistent with the plan and will contribute to the city’s ability to meet residential and non-residential demand, as well as demand for community resources. Notably, if the master or specific plan is amended or is not built, there may be opportunity for development or redevelopment different from the current stipulations of the master or specific plans.

The following method was used to determine “opportunity” sites. The first three steps apply to underutilized sites, which contain existing structures or uses. The last two steps apply to both vacant and underutilized sites.

- **Assessed Building Value/Land Value Ratio.** The assessed building value to the land value for each site was compared. Building values that are less than their land values indicate that there is potential for redevelopment. Whereas, building values that exceed land values indicate that redevelopment is less likely.
- **Building Intensity.** Sites with lower development intensities are more likely to see new or additional development in the future. Sites with floor area ratio (FAR) values of 0.15 or less were identified as having potential for redevelopment or expansion.
- **Elimination of Existing Uses.** Sites with existing residential uses, educational or institutional uses, existing recreation areas and protected open space and transportation and utilities infrastructure were excluded from the

analysis, as major reuse of these uses is unlikely. Vacant and underutilized commercial and industrial sites tend to have the greatest opportunity for redevelopment.

- **Site Constraints.** Environmental and physical factors, such as sites with steep slopes and flood potential, may constrain development opportunities on both vacant and underutilized sites. These factors were evaluated as described in the following section and sites were removed as potential opportunity sites accordingly.
- **Windshield Survey and Discussions with Staff.** Following the application of the methods described above, a map was prepared showing a first draft of potential development sites. A “windshield” survey was conducted to check the validity of sites and identify any constraints that may not have been revealed during the analysis, but became clear through a site visit. In addition, City staff provided input about known site availability and pending or proposed projects.

Some opportunity sites may not see any new development over the next 25 years, while other sites not considered as being an opportunity site may. The purpose behind identifying opportunity sites is to explore the likely amount of development that would result from application of land use designations.

Development Constraints

Development constraints due to environmental and physical factors reduce the potential for development on some potential development opportunity sites. Potential constraints include locations within existing or proposed HMP hardline conservation areas; existing or proposed HMP standards areas; 100-year flood zones; airport safety zones and noise impact areas; and areas that have steep slopes (defined as over 25 percent). As a result, some potential opportunity sites may require mitigations to reduce environmental constraints or may be determined inappropriate for development. Potential opportunity sites have not been removed from the inventory due to potential constraints, but they are overlaid together on Figure 3.2-2.

There are other constraints to development, not mapped here, such as the constrained lands list in Zoning Ordinance Section 21.53.230, coastal policies such as dual criteria slopes and other state requirements. For example, slope constraints entail detailed site level calculations: no more than 50 percent of the portion of a site containing 25 to 40 percent slopes may be utilized for calculating allowable residential density. Residential development on slopes of 25 to 40 percent, inclusive, shall be designed to minimize the amount of grading necessary to accommodate the project. For projects within the Coastal Zone, the grading provisions of the Carlsbad Local Coastal Program and Chapters 21.38 and 21.203 of the Zoning Ordinance apply. In addition, the I-5 widening project brings both constraints and opportunities: may require some relocation of property, but potential enhancement projects could provide a nature center at the La Costa Avenue intersection and trails along Batiquitos and Agua Hedionda lagoons.

Focus Areas

As a result of this analysis, potential opportunity sites are identified in the Village and greater downtown area, along the city’s major corridors and in vacant sites within existing communities, as shown in Figure 3.2-3. These opportunity sites were then grouped into 11 focus areas. These focus areas help facilitate the planning of neighborhoods while also allowing the area to come together to form a comprehensive and cohesive concept for the city. The 11 focus areas are as follows:

- | | | |
|--|------------------------------|------------------------------|
| 1. Northwest Coastal | 5. Sunny Creek Commercial | 9. Ponto/Southern Waterfront |
| 2. Plaza Camino Real Commercial Corridor | 6. Mandana | 10. Aviara |
| 3. Quarry Creek | 7. Palomar Corridor | 11. South El Camino Real |
| 4. Marja Acres | 8. Southern Freeway Corridor | |

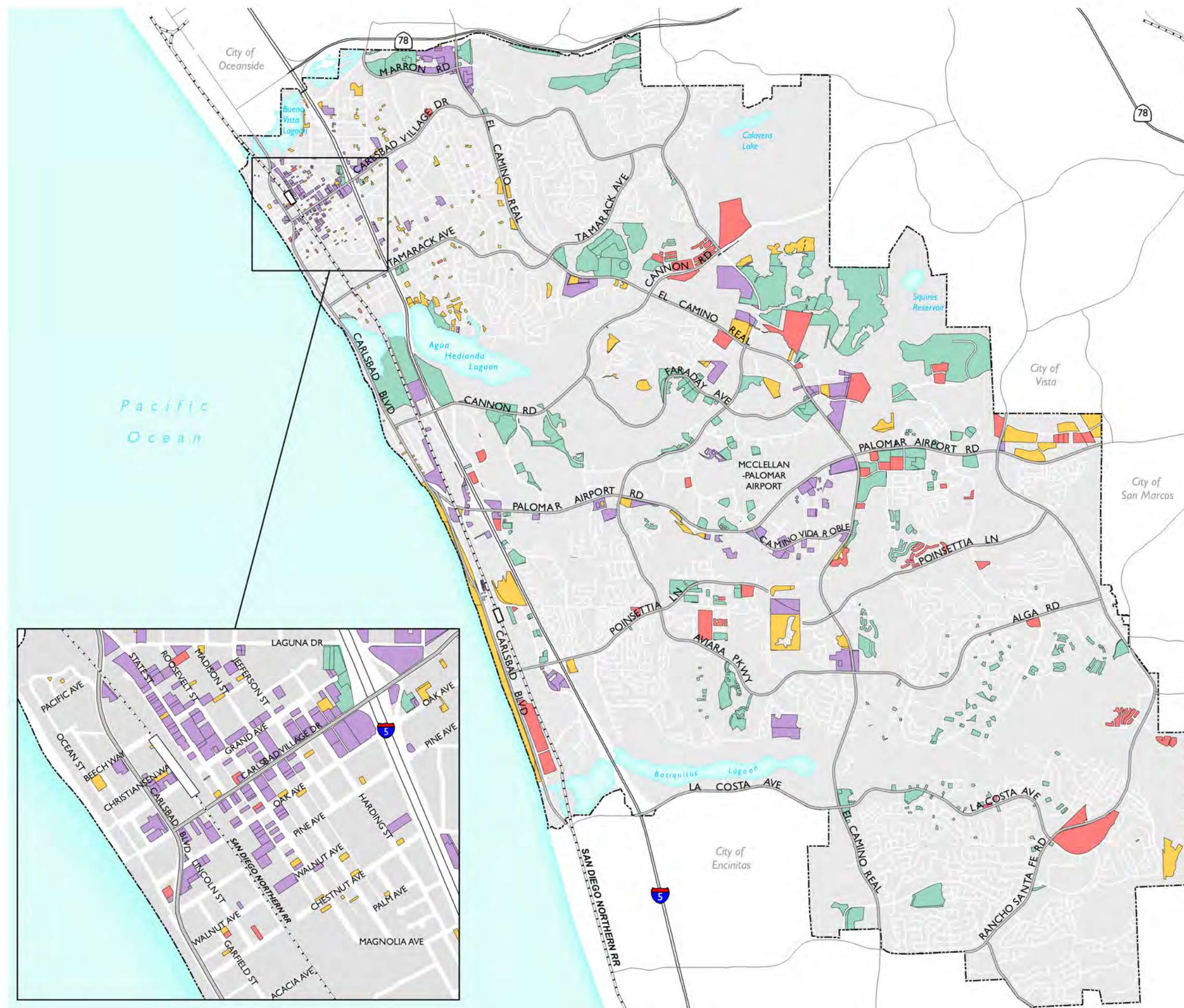
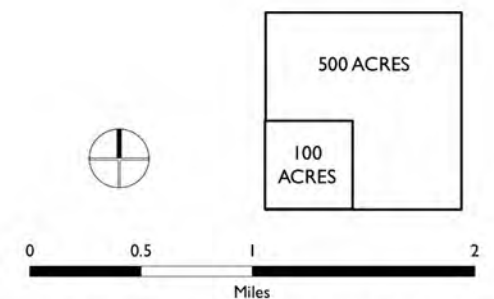


Figure 3.2-1: Potential Opportunity Sites

- Vacant
- Underutilized
- Opportunity Sites with a Master/Specific Plan
- Development Projects
- Highways
- Major Roads
- Railroad & Stations
- City Limits



Source: City of Carlsbad, 2011; SANDAG, 2008; Dyett & Bhatia, 2011.

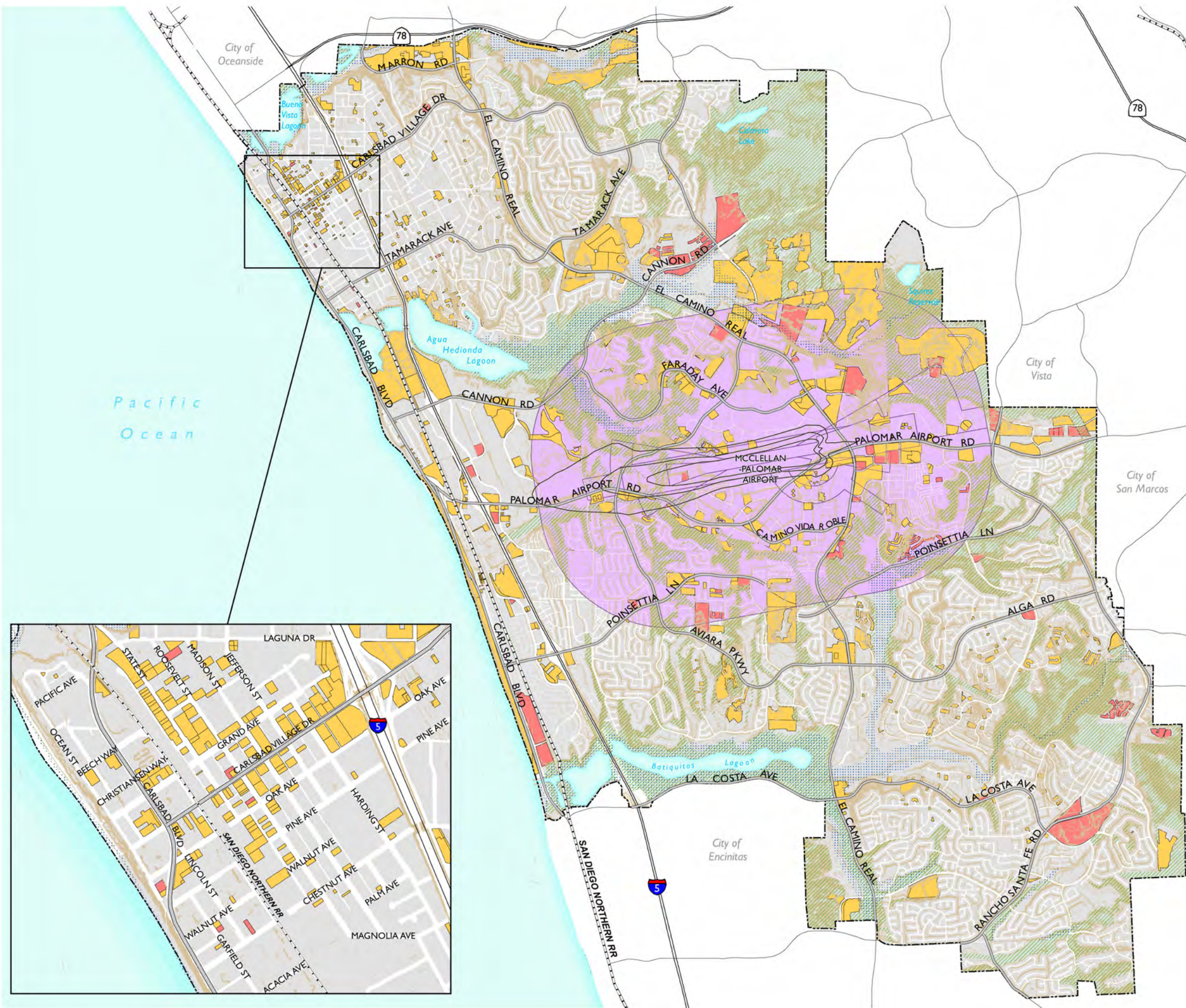
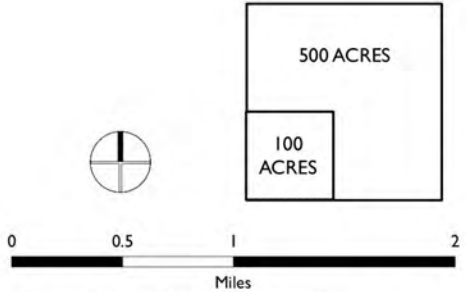
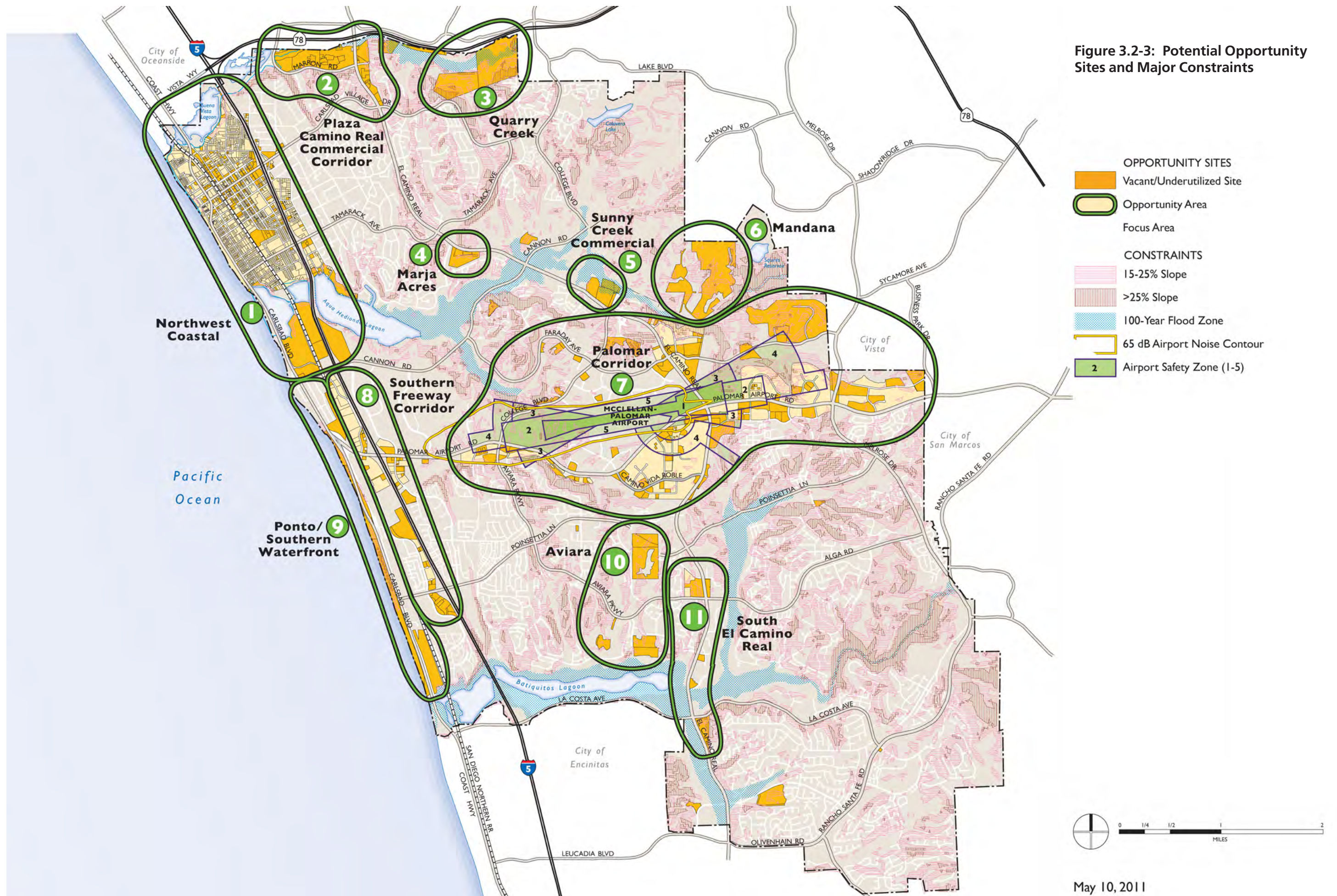


Figure 3.2-2: Development Constraints

- Development Projects
- Opportunity Sites
- Slope > 25%
- 100-year Flood Plain
- Existing and Proposed Hardline Conservation Area
- Airport Noise Contour Area > 65dB
- Airport Safety Zones 1-6
- Highways
- Major Roads
- Railroad
- City Limits



Source: City of Carlsbad, 2011; SANDAG, 2009; Dyett & Bhatia, 2011.



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4 Concepts

4.1 Overview and Common Characteristics

The land use concepts represent alternative strategies for accommodating projected population and employment growth, while reflecting the core values identified in the Carlsbad Community Vision. This report presents these concepts and their implications for the City of Carlsbad so that decision-makers can make informed choices when determining the location of future growth. It is likely that no single concept will find universal acceptance; rather, the best ideas from each of the three land use concepts will ultimately be combined to become a unified Preferred Plan.

Common Characteristics

The three concepts share several characteristics.

- 1. Creating Destinations.** Carlsbad residents have expressed the desire to have destinations that build on the prime location of the city adjacent to the ocean. In the Northwest Corridor (Focus Area 1), each of the concepts show mixed use in the Village and Barrio neighborhoods, describing continued investment to create a vibrant community where people can eat, shop, play and live. On the power plant site (Focus Area 1), each concept includes visitor serving commercial such as restaurants, hotels, and retail shops as well as open space and beach access.
- 2. Employment-Focused Development in Palomar Corridor.** The Palomar Corridor (Focus Area 7) is shown as an employment growth area under each concept. This area has excellent regional access and includes the McClellan-Palomar Airport. Although the dominant future uses here will be non-residential, residential uses are explored in two of the concepts.
- 3. Street Connectivity.** Although not shown in detail on the maps on the following pages, one of the major features of the land use concepts is improved street connectivity, particularly in terms of east-west connections. The concepts show potential streets that could enhance connectivity and facilitate circulation. Marron Road is extended, connecting Plaza Camino Real Commercial Corridor (Focus Area 2) with Quarry Creek (Focus Area 3). A connection is proposed for College Blvd through Sunny Creek Commercial (Focus Area 5) and Cannon Road is extended east north of Sunny Creek Commercial. Also proposed is the connection of Poinsettia Lane through Aviara (Focus Area 10). The street connections shown on the land use concepts are consistent with the existing General Plan, but the connections will need to be analyzed as part of the General Plan update.
- 4. Enhanced Bicycle and Pedestrian Connections.** Each of the concepts assumes improvements to pedestrian and bicycle pathways.
- 5. Open Space.** The concepts support the continuation of the open space and park planning efforts by the city. Any future development on opportunity sites located in areas adjacent to sensitive biological resources, such as lagoons and hillsides, must comply with the city’s HMP and open space regulations to ensure that habitats are preserved and open space is provided.
- 6. Preservation of Existing Neighborhoods.** Land uses in the majority of the city remain the same in all of the concepts. Most existing established neighborhoods will not see a land use or intensity change.

Land Use Classifications

In the concepts described in the following sections, envisioned development is depicted according to multi-colored general land use classifications. These land use classifications are generalized at this stage in the process, and will be refined in later stages. Chapter 5 contains a matrix that compares land uses among the three different concepts.

TABLE 4.1-1: LAND USE CLASSIFICATIONS FOR CONCEPT PLANS		
	GENERAL LAND USE	DESCRIPTION
	Very Low Density Residential	Detached single family dwellings on large lots.
	Low Density Residential	Detached single family dwellings on standard or smaller lots.
	Medium Density Residential	Could include attached or detached single family dwellings, duplexes, and townhouses.
	High Density Residential	Primarily attached dwellings from townhouses to stacked multi-family housing.
	Mixed Use	Variety of low-, medium-, and high-density residential, office and general commercial uses.
	Commercial	Retail uses, including regional and neighborhood shopping with clusters of street-front stores; also includes hotels.
	Industrial/Office	Clusters of office activities that generate high employment yield per acre and smaller-scale professional, medical and other support services. Also includes mix of manufacturing, production, warehousing, general service, storage and distribution activities.
	Campus	Public and private schools, libraries, and colleges.
	Commercial Recreation	Visitor attractions and commercial uses that serve travel and recreational needs such as recreation facilities, museums, and restaurants.
	Parks/Open Space	Open space, special resource areas, parks, and trails.

4.2 Concept A: Centers

The Centers Concept directs development to the Village and several new neighborhood centers. The centers are placed in strategic, visible locations along transit, and distributed to maximize accessibility from residential neighborhoods. Each center will include local shopping as a pedestrian-oriented focus for the surrounding neighborhood, accessible to local residents. High and medium density housing, in addition to new parks and open spaces, would surround the retail centers or be integrated in mixed-use buildings. Although some centers will be neighborhood oriented, others—such as the Village and the redeveloped Plaza Camino Real—would be citywide draws.

A significant majority of the city’s future housing needs will be accommodated in the centers, enabling people to live close to shops and services and along transit corridors. All centers will have transit access—bus or rail—and pedestrian connections between the centers and the surrounding neighborhoods will be improved to enhance walkability.

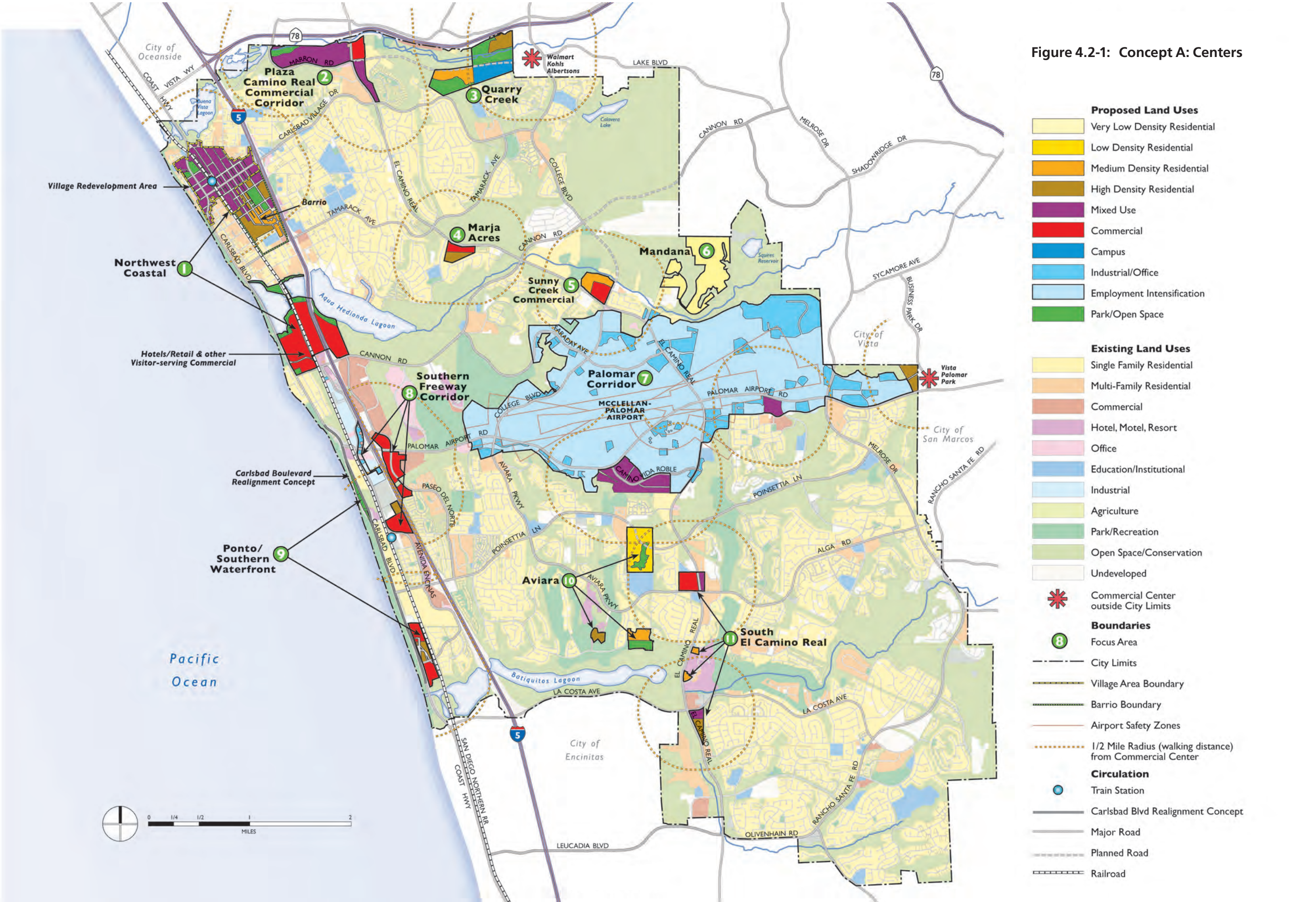
New centers will be located along El Camino Real, Palomar Airport Road and adjacent to the Poinsettia Coaster Station. Residential uses are located along the eastern city limits, in proximity to local shopping in adjacent cities. The Village and Barrio will see increases in housing and amenities, while the Power Plant will be redeveloped with hotels, retail, and other non-residential uses. This redevelopment will include enhanced beach and lagoon access as well as additional open space along the lagoon. Quarry Creek will include new housing as well as a new campus and ample open space.

Table 4.2-1 presents a summary of reasonably anticipated or likely new development from the opportunity sites in Concept A – Centers. Table 4.2-2 gives a detailed breakdown of these new residential units by type. The net growth in housing units is presented in more detail in Section 5.2 Housing Units and Population and the net growth in non-residential uses is presented in 5.4 Non-Residential Development and Jobs. Housing capacity is discussed in Section 5.3 Residential Development and Growth Management Capacity.

TABLE 4.2-1: CONCEPT A – CENTERS BUILDOUT SUMMARY						
	RESIDENTIAL (UNITS)	COMMERCIAL (SF)	INDUSTRIAL/ OFFICE (SF)	CAMPUS (SF)	HOTEL (ROOMS)	OPEN SPACE/ PARKS (ACRES)
Northwest	3,170	3,087,000	1,121,000	–	2,160	50.2
Northeast	1,260	451,000	3,307,000	316,000	–	68.8
Southwest	1,270	1,262,000	1,019,000	–	640	46.4
Southeast	430	248,000	673,000	–	–	–
Citywide Total	6,130	5,049,000	6,119,000	316,000	2,800	165.4
Existing to be Redeveloped	1,733	2,527,000	1,700,000	–	215	–
Net Increase	4,410	2,522,000	4,419,000	316,000	2,590	165.4
Notes:						
a. Numbers may not add up due to rounding.						
b. For residential units, net increase was calculated by quadrant, rounded, and then summed as shown in Table 5.2-1 and in detail in Table 5.2-5.						

TABLE 4.2-2: CONCEPT A – CENTERS DETAILED NEW RESIDENTIAL BUILDOUT						
	VERY LOW DENSITY RESIDENTIAL	LOW DENSITY RESIDENTIAL	MEDIUM DENSITY RESIDENTIAL	HIGH DENSITY RESIDENTIAL	MIXED USE	TOTAL UNITS
Northwest	–	–	200	1,300	1,670	3,170
Northeast	130	–	290	760	80	1,260
Southwest	–	160	120	560	430	1,270
Southeast	–	–	50	230	150	430
Citywide Total	130	160	660	2,850	2,330	6,130

Figure 4.2-1: Concept A: Centers



4.3 Concept B: Active Waterfront

The Active Waterfront Concept will place greater development along the waterfront, enabling residences, hotels, and other uses to be close to the ocean. Residents and visitors will enjoy waterfront dining, shopping, and lingering experience in clusters of restaurants, cafés, and smaller stores up and down the coast. The Power Plant will be developed with a mix of residential, hotel, and retail uses, with community-accessible open spaces along Agua Hedionda Lagoon. The redevelopment of the Power Plant site will result in enhanced access to the beach and lagoon and reinforce Carlsbad’s beach community character.

New development along the coast will enhance connections for existing neighborhoods to the east by providing access points and linkages to the beach. About half of the city’s new residential growth will be in the waterfront focus areas (Focus Areas 1, 8, and 9).

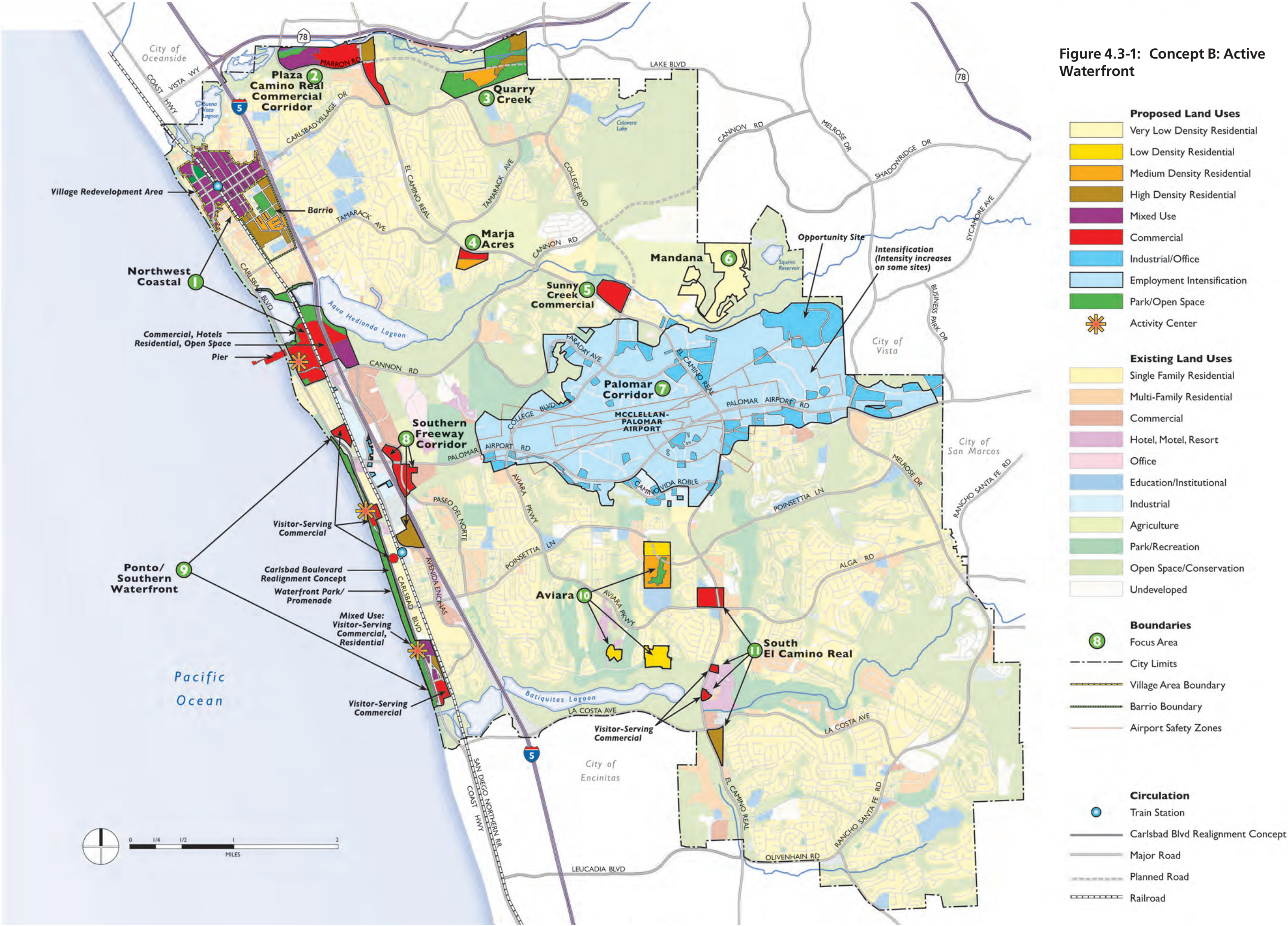
Plaza Camino Real Commercial Corridor will have a mix of uses, while Quarry Creek will have new residential uses. These focus areas will accommodate most of the other new residential growth and will locate residents near Carlsbad’s natural amenities such as lagoons and open spaces. Palomar Corridor will continue to contain only employment uses.

Table 4.3-1 presents a summary of reasonably anticipated or likely new development from the opportunity sites in Concept B – Active Waterfront. Table 4.3-2 gives a detailed breakdown of these new residential units by type. The net growth in housing units is presented in more detail in Section 5.2 Housing Units and Population and the net growth in non-residential uses is presented in 5.4 Non-Residential Development and Jobs. Housing capacity is discussed in Section 5.3 Residential Development and Growth Management Capacity.

TABLE 4.3-1: CONCEPT B – ACTIVE WATERFRONT BUILDOUT SUMMARY					
	RESIDENTIAL (UNITS)	COMMERCIAL (SF)	INDUSTRIAL/OFFICE (SF)	HOTEL (ROOMS)	OPEN SPACE/ PARKS (ACRES)
Northwest	3,040	2,939,000	1,049,000	1,960	57.1
Northeast	1,130	484,000	3,457,000	–	101.3
Southwest	1,390	575,000	878,000	610	91.3
Southeast	400	–	883,000	300	–
Citywide Total	5,960	3,998,000	6,267,000	2,870	249.7
Existing to be Redeveloped	1,613	2,527,000	1,333,000	215	–
Net Increase	4,360	1,471,000	4,934,000	2,660	249.7
Notes:					
a. Numbers may not add up due to rounding.					
b. For residential units, net increase was calculated by quadrant, rounded, and then summed as shown in Table 5.2-1 and in detail in Table 5.2-5.					

TABLE 4.3-2: CONCEPT B – ACTIVE WATERFRONT DETAILED NEW RESIDENTIAL BUILDOUT						
	VERY LOW DENSITY RESIDENTIAL	LOW DENSITY RESIDENTIAL	MEDIUM DENSITY RESIDENTIAL	HIGH DENSITY RESIDENTIAL	MIXED USE	TOTAL UNITS
Northwest	–	–	250	1,310	1,490	3,040
Northeast	130	–	170	820	–	1,130
Southwest	–	160	320	840	70	1,390
Southeast	–	–	–	400	–	400
Citywide Total	130	160	740	3,380	1,560	5,960

Figure 4.3-1: Concept B: Active Waterfront



4.4 Concept C: Core Focus

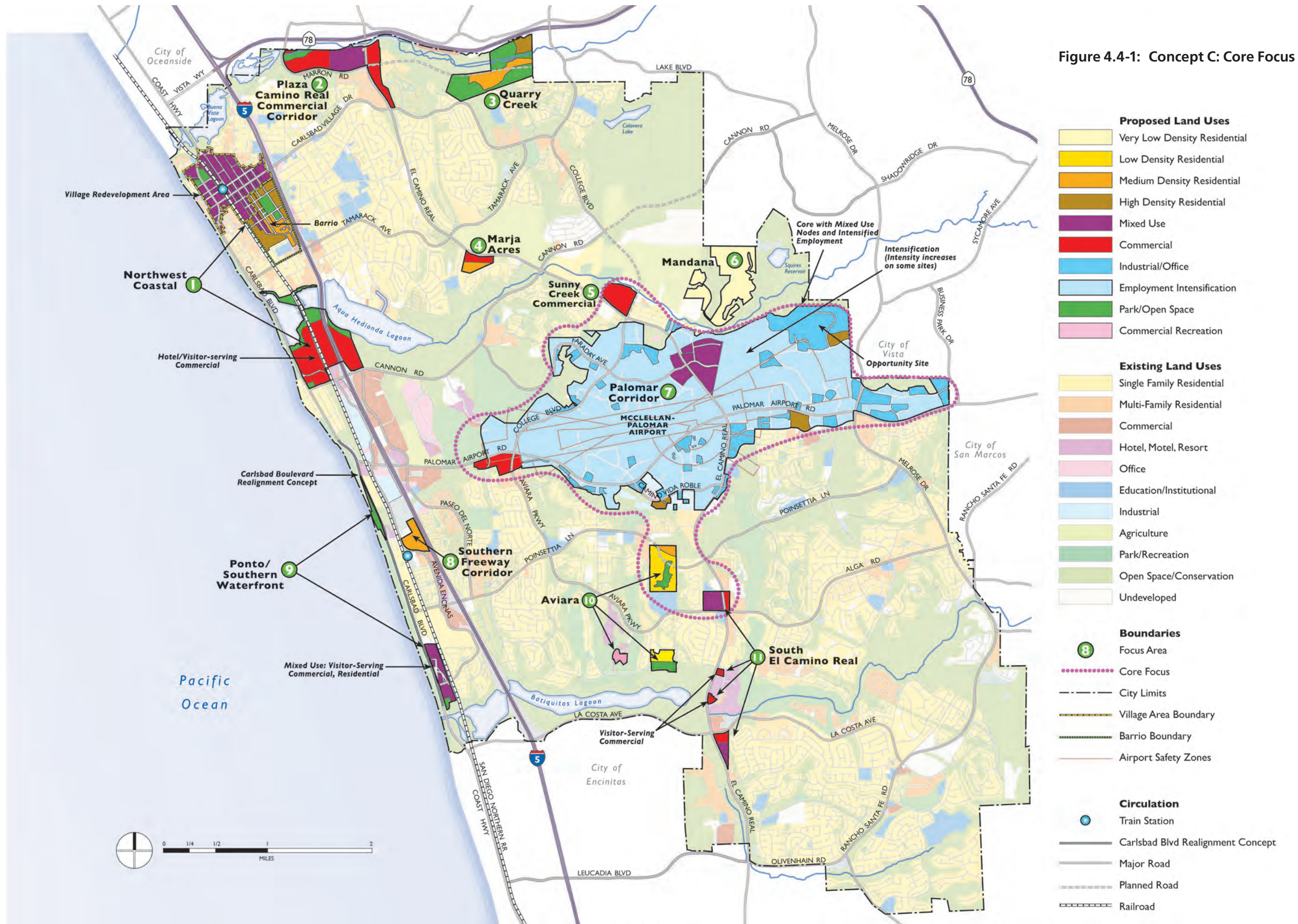
In this concept, new residential and commercial uses will be placed at strategic locations at the edges of Carlsbad’s employment core in the geographic center of the city—enabling workers to live close to jobs, and stores and restaurants to enjoy patronage from both residents and workers. Shuttles and enhanced bicycle and pedestrian paths would link residential and employment clusters. Although some sites currently envisioned for employment uses will be developed with residential and commercial uses, there remains enough area to accommodate office and industrial uses, ensuring enough capacity for continued employment growth.

Just over a third of the new housing growth will be in central Carlsbad, while the rest will be dispersed at different locations. The Power Plant and southern portion of Carlsbad Boulevard will primarily accommodate hotel and visitor-serving commercial uses and will provide access to the beach and lagoon for the community

Table 4.4-1 presents a summary of reasonably anticipated or likely new development from the opportunity sites in Concept C – Core Focus. Table 4.4-2 gives a detailed breakdown of these new residential units by type. The net growth in housing units is presented in more detail in Section 5.2 Housing Units and Population and the net growth in non-residential uses is presented in 5.4 Non-Residential Development and Jobs. Housing capacity is discussed in Section 5.3 Residential Development and Growth Management Capacity.

TABLE 4.4-1: CONCEPT C – CORE FOCUS BUILDOUT SUMMARY						
	RESIDENTIAL (UNITS)	COMMERCIAL (SF)	INDUSTRIAL/ OFFICE (SF)	COMMERCIAL RECREATION (SF)	HOTEL (ROOMS)	OPEN SPACE/ PARKS (ACRES)
Northwest	3,180	3,096,000	974,000	–	2,110	56.9
Northeast	1,290	901,000	3,163,000	–	270	101.3
Southwest	920	643,000	580,000	103,000	500	40.6
Southeast	500	281,000	674,000	–	–	–
Citywide Total	5,880	4,920,000	5,391,000	103,000	2,880	198.8
Existing to be Redeveloped	1,741	2,561,000	1,954,000	–	215	–
Net Increase	4,160	2,359,000	3,437,000	103,000	2,670	198.8
Notes:						
a. Numbers may not add up due to rounding.						
b. For residential units, net increase was calculated by quadrant, rounded, and then summed as shown in Table 5.2-1 and in detail in Table 5.2-5.						

TABLE 4.4-2: CONCEPT C – CORE FOCUS DETAILED NEW RESIDENTIAL BUILDOUT						
	VERY LOW DENSITY RESIDENTIAL	LOW DENSITY RESIDENTIAL	MEDIUM DENSITY RESIDENTIAL	HIGH DENSITY RESIDENTIAL	MIXED USE	TOTAL UNITS
Northwest	–	–	280	1,330	1,570	3,180
Northeast	130	–	260	550	360	1,290
Southwest	–	180	290	190	260	920
Southeast	–	–	–	450	40	500
Citywide Total	130	180	820	2,520	2,220	5,880



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5

Comparison of Plans

5.1 Land Use

Table 5.1-1 below provides a summary comparison of the land uses in each focus area under each concept.

TABLE 5.1-1: COMPARISON OF CONCEPTS				
#	FOCUS AREA	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
	Overall Strategy	This concept focuses on having walkable neighborhoods where residents have access to retail, services, and jobs. Neighborhoods are focused on mixed use areas with supporting residential and commercial uses within a ½ mile radius.	This concept focuses on how to activate the waterfront area in order to create a destination that is accessible to the surrounding community.	This concept focuses on enhancing employment areas and integrating these with housing, through the location of commercial and residential uses near jobs.
1	Northwest Coastal	<p>Mixed use in the Village will extend into residential uses in the Barrio, creating a connection between higher density residential and mixed use. The Power Plant area will have hotels/retail, and other visitor serving commercial.</p> <p>Village: Mixed Use</p> <p>Barrio: High and Medium Density Residential; Mixed Use; Parks/Open Space</p> <p>Power Plant: Commercial (hotels, retail/restaurants); Parks/Open Space</p>	<p>Mixed use in the Village, along with infill high and medium density development in Barrio. The Power Plant area will be an activity node with commercial, hotels, residential and open space.</p> <p>Village: Mixed Use</p> <p>Barrio: High and Medium Density Residential; Parks/Open Space</p> <p>Power Plant: Commercial and Mixed Use (hotels, retail/restaurant, residential); Parks/Open Space</p>	<p>The Power Plant will have hotel and visitor services with mixed use in the Village and residential in the Barrio.</p> <p>Village: Mixed Use</p> <p>Barrio: High and Medium Density Residential; Mixed Use; Parks/Open Space</p> <p>Power Plant: Commercial (hotel/visitor services); Parks/Open Space</p>
2	Plaza Camino Real Commercial Corridor	Mixed Use; Commercial; Parks/Open Space	Mixed Use; Commercial; High Density Residential and Commercial east of El Camino Real; Parks/ Open Space	Mixed Use; Commercial; Parks/Open Space
3	Quarry Creek	Medium and High Density Residential; Campus; Parks/Open Space	Medium and High Density Residential; Parks/Open Space	Medium and High Density Residential; Parks/Open Space
4	Marja Acres	High Density Residential; Commercial along El Camino Real	Medium Density Residential; Commercial along El Camino Real	Medium Density Residential; Commercial along El Camino Real
5	Sunny Creek Commercial	Medium Density Residential; Commercial	Commercial	Commercial
6	Mandana	Very Low Density Residential	Very Low Density Residential	Very Low Density Residential
7	Palomar Corridor	Industrial/Office, with a new neighborhood at east end (High Density Residential); Mixed Use	Industrial/Office	Industrial/Office with intensified employment at higher intensities. New Mixed Use (commercial and residential) clusters are located outside of the Airport Safety Zone, adjacent to employment uses. Higher density residential and open space is located on the periphery. Uses: High Density Residential; Mixed Use; Commercial; Parks/ Open Space
8	Southern Freeway Corridor	Commercial and High Density Residential uses around Poinsettia Station, with free-way oriented Commercial uses at Palomar freeway interchange. Industrial/Office along Avenida Encinas.	High density residential to create more residential opportunities in area and support commercial and parks/open space activity in Area 9. Uses: High Density Residential; Commercial	Medium Density Residential
9	Ponto/Southern Waterfront	High Density Residential; Commercial; Parks/Open Space	A Waterfront Park/Promenade is envisioned along the coastline with activity nodes located along the waterfront which will be accessible to neighborhoods in Area 8. Uses: High Density Residential; Mixed Use; Commercial; Parks/Open Space	Mixed Use; Parks/Open Space
10	Aviara	High, Medium and Low Density Residential; Parks/Open Space	Low and Medium Density Residential; Parks/Open Space	Low and Medium Density Residential; Commercial Recreation; Parks/Open Space
11	South El Camino Real	Medium and High Density Residential; Commercial; Mixed Use	High Density Residential; Commercial	Mixed Use; Commercial

5.2 Housing Units and Population

The following tables compare reasonably expected or likely housing unit and population growth across the three land use concepts. While the three concepts have different geographic strategies, housing and population growth resulting from the concepts is similar, with increase in housing units ranging from 4,160 in Concept C – Core Focus to 4,410 in Concept A– Centers. Tables 5.2-1 and 5.2-2 summarize the net increase in housing and population, as shown in more detail in Table 5.2-5. Tables 5.2-3 and 5.3-4 show the reasonably expected or likely citywide housing units and population at buildout. These estimates differ from SANDAG projections because these estimates take into account land availability and development constraints, and estimates growth likely to occur while SANDAG’s projections show maximum capacity as allowed by the current General Plan. A discussion of capacity and a comparison of capacity among the three concepts are located in Section 5.3 Residential Development and Growth Management Capacity.

TABLE 5.2-1: NET HOUSING UNIT INCREASE COMPARISON SUMMARY			
QUADRANT	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Northwest	1,460	1,450	1,460
Northeast	1,260	1,130	1,290
Southwest	1,260	1,380	910
Southeast	430	400	500
Citywide Total	4,410	4,360	4,160

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011; SANDAG, 2011.

TABLE 5.2-2: NET POPULATION INCREASE COMPARISON SUMMARY			
QUADRANT	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Northwest	3,660	3,630	3,660
Northeast	3,160	2,830	3,230
Southwest	3,160	3,460	2,280
Southeast	1,080	1,000	1,250
Citywide Total	11,060	10,920	10,420

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011; SANDAG, 2011.

TABLE 5.2-3: CITYWIDE HOUSING UNITS ESTIMATE AT BUILDOUT COMPARISON			
QUADRANT	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Northwest	13,763	13,753	13,763
Northeast	7,322	7,192	7,352
Southwest	11,646	11,766	11,296
Southeast	16,157	16,127	16,227
Citywide Total	48,888	48,838	48,638

Note:
a. Citywide Total Housing Units at buildout = Existing + Pipeline + Net New Housing Units from Concepts (Table 5.2-1)
b. Numbers may not add up due to rounding.

Source: Dyett & Bhatia, 2011; SANDAG, 2011; Working Paper 6, 2011.

TABLE 5.2-4: CITYWIDE POPULATION ESTIMATE AT BUILDOUT COMPARISON			
QUADRANT	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Northwest	34,466	34,441	34,466
Northeast	18,336	18,011	18,411
Southwest	29,164	29,465	28,288
Southeast	40,461	40,386	40,636
Citywide Total	122,428	122,303	121,802

Note:
a. Population estimates assume 5.5% vacancy rate and 2.65 persons per household as projected by SANDAG 2050 Regional Growth Forecast for 2040.
b. Numbers may not add up due to rounding.

Source: Dyett & Bhatia, 2011; Working Paper 3, 2011; SANDAG, 2011.

TABLE 5.2-5: CITYWIDE POPULATION NET INCREASE COMPARISON				
		CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Northwest				
1	Northwest Coastal	2,520	2,810	2,790
2	Plaza Camino Real Commercial Corridor	350	130	180
4	Marja Acres	300	100	100
7	Palomar Corridor	–	–	110
	Northwest Total	3,170	3,040	3,180
	Existing Units Redeveloped	1,712	1,592	1,720
	Net Dwelling Unit Increase	1,460	1,450	1,460
	Population Increase	3,660	3,630	3,660
Northeast				
2	Plaza Camino Real Commercial Corridor	80	350	–
3	Quarry Creek	520	650	470
5	Sunny Creek Commercial	90	–	–
6	Mandana	130	130	130
7	Palomar Corridor	440		690
	Northeast Total	1,260	1,130	1,290
	Existing Units Redeveloped	3	3	3
	Net Dwelling Unit Increase	1,260	1,130	1,290
	Population Increase	3,160	2,830	3,230
Southwest				
7	Palomar Corridor	430	–	190
8	Southern Freeway Corridor	140	700	220
9	Ponto/Southern Waterfront	200	220	150
10	Aviara	500	470	250
11	South El Camino Real	–	–	110
	Southwest Total	1,270	1,390	920
	Existing Units Lost Redeveloped	14	14	14
	Net Dwelling Unit Increase	1,260	1,380	910
	Population Increase	3,160	3,460	2,280
Southeast				
7	Palomar Corridor	90	–	450
11	South El Camino Real	340	400	
	Southeast Total	430	400	500
	Existing Units Redeveloped	4	4	4
	Net Dwelling Unit Increase	430	400	500
	Population Increase	1,080	1,000	1,250
Notes:				
a. Existing Units Redeveloped are units that exist on opportunity sites that are anticipated to be redeveloped; number includes pipeline projects.				
b. Population estimates assume 5.5% vacancy rate and 2.65 persons per household as projected by SANDAG 2050 Regional Growth Forecast for 2040.				
c. Numbers may not add up due to rounding.				

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011; SANDAG, 2011.

5.3 Residential Development and Growth Management Capacity

Carlsbad’s Growth Management Plan limits the total number of residential housing units in the city to 54,599, and limits the total number of housing units allowed in each quadrant of the city. Table 5.3-1 shows the maximum dwelling units allowed in each quadrant. All land use concepts are in compliance with the quadrant and citywide housing unit limitations established by the Growth Management Plan.

To manage compliance with Growth Management dwelling unit limitations, the City Council established Growth Management Control Point (GMCP) densities for all residential land use designations in the city (for example, in the city’s Residential Low Medium land use designation, the GMCP density is 3.2 dwelling units per acre). To ensure that the Growth Management dwelling unit limitations are not exceeded in the future, all residential development must, on average, not exceed the GMCP densities.

When development occurs below the GMCP, the “excess” number of units is placed into the Excess Dwelling Unit Bank. For example, on a ten acre (net) site with a GMCP of 3.2 dwelling units per acre, the GMCP would allow a total of 32 dwelling units; if 30 units are constructed on the site, then 2 dwelling units are placed in the Excess Dwelling Unit Bank.

The “excess” dwelling units in the bank are then available for certain types of residential projects (such as affordable housing or senior housing projects) to be constructed at a density that exceeds the GMCP. If there are no “excess” dwelling units in the bank, residential development projects cannot exceed the GMCP. The Excess Dwelling Unit Bank ensures that the Growth Management dwelling unit limitations are not exceeded. On December 17, 2002, the City Council amended Council Policy Statement 43 by reducing the accumulated number of excess units from 5,985 to a new total of 2,800. Since December 17, 2002, the Excess Dwelling Unit Bank balance has increased to 2,963 dwelling units (as of November 30, 2011).

To accommodate the anticipated demand for housing that will result from the forecasted future population and employment growth in Carlsbad, each of the land use concepts propose an increase in the number of residential units allowed on some of the opportunity sites. This increase in residential units will result in residential development above the applicable GMCP on those sites, which means all of the concepts will require units to be taken out of the Excess Dwelling Unit Bank and allocated to specific opportunity sites. The land use concepts have been analyzed to ensure that the proposed increase in residential dwelling units will not exceed the number of units allowed by the Growth Management Plan (citywide and in each quadrant). However, some of the units removed from the Excess Dwelling Unit Bank in 2002 will be needed in order to accommodate the anticipated future demand for housing. Utilizing the excess units removed from the bank in 2002 will be a policy decision that the City Council will need to consider and decide on during their review of the Preferred Plan.

Table 5.3-1 shows that the new residential capacity resulting from the three concepts will not exceed the Growth Management Dwelling Unit Cap. Tables 5.3-4 to 5.3-6 shows that the three concepts will not need units beyond those available in the Excess Dwelling Unit Bank, with the addition of the units removed in 2002; Table 5.3-3 shows excess units will remain in the Excess Dwelling Unit Bank after full implementation of the concepts.

TABLE 5.3-1: NEW RESIDENTIAL CAPACITY COMPARISON					
	NORTHWEST	NORTHEAST	SOUTHWEST	SOUTHEAST	TOTAL
Growth Management Dwelling Unit Cap	15,370	9,042	12,859	17,328	54,599
Units at Full Capacity (Based on Existing General Plan GMCP)	13,220	7,862	11,108	16,713	48,903
Units at Full Capacity (New)					
Concept A: Centers	15,217	8,970	12,248	17,213	53,648
Concept B: Active Waterfront	15,163	8,815	12,376	17,187	53,541
Concept C: Core Focus	15,181	8,968	11,822	17,296	53,267

Source: City of Carlsbad Planning Department, 2011; SANDAG, 2011; Dyett & Bhatia, 2011.

TABLE 5.3-2: EXCESS DWELLING UNIT BANK (EDUB) ¹					
	NORTHWEST	NORTHEAST	SOUTHWEST	SOUTHEAST	TOTAL
Growth Management Dwelling Unit Cap	15,370	9,042	12,859	17,328	54,599
Units at Full Capacity (Based on Existing General Plan GMCP)	-13,220	-7,862	-11,108	-16,713	-48,903
Units Available in EDUB + units removed in 2002	2,150 ²	1,180	1,751	615	5,696
Units Available in EDUB (excluding units removed in 2002) ⁴	1,381 ³	607	716	259	2,963

1. Excess dwelling unit balance as of August 2011

2. 875 for Village, 1275 for Other

3. 875 for Village, 506 for Other

4. As of November 2011

Source: City of Carlsbad Planning Department, 2011.

TABLE 5.3-3: REMAINING EXCESS DWELLING UNITS COMPARISON							
	EXCESS DWELLING UNITS AVAILABLE IN EDUB ¹	CONCEPT A – CENTERS		CONCEPT B – ACTIVE WATERFRONT		CONCEPT C – CORE FOCUS	
		UNITS NEEDED FROM EDUB	UNITS REMAINING IN EDUB	UNITS NEEDED FROM EDUB	UNITS REMAINING IN EDUB	UNITS NEEDED FROM EDUB	UNITS REMAINING IN EDUB
Northwest	2,150	1,997	153	1,943	207	1,961	189
Northeast	1,180	1,108	72	953	227	1,106	74
Southwest	1,751	1,140	611	1,268	483	714	1,037
Southeast	615	500	115	474	141	583	32
Citywide Total	5,696	4,745	951	4,638	1,058	4,364	1,332

1. Includes the units removed in 2002.

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011; SANDAG, 2011.

TABLE 5.3-4: CONCEPT A – CENTERS CAPACITY

#	FOCUS AREA	CURRENT GP GMCP DENSITY	NET DU CAPACITY AT CURRENT GMCP DENSITY	PROPOSED DENSITY	NET DU CAPACITY AT PROPOSED DENSITY¹	UNITS NEEDED FROM EDUB
Northwest						
1	Northwest Coastal – Village	0	0	MU-V	875	875
	Northwest Coastal – Barrio	11.5/19	61	9.5/30/MU	407	346
	Northwest Coastal – Power Plant	0	0	0	0	0
2	Plaza Camino Real & North County Plaza	0	0	MU	479	479
4	Marja Acres	0/3.2	0/59	0/30	356	297
7	Palomar Corridor	0	0	0	0	0
8	Southern Freeway	0	0	0	0	0
9	Southern Waterfront	0	0	0	0	0
Northeast						
2	Plaza Camino Real Commercial Corridor	0	0	0/MU	117	117
3	Quarry Creek	0/3.2	283	0/9.5/30	713	430
5	Sunny Creek	0/ 3.2	66	0/9.5	109	43
6	Mandana	1	155	1	155	0
7	Palomar Corridor	0	0	0/30	518	518
Southwest						
7	Palomar Corridor	0	0	0/MU	503	503
8	Southern Freeway	0	0	0/30	167	167
9	Southern Waterfront – Ponto	0/11.5	0/39	0/30	233	194
10	Aviara – Poinsettia	0/3.2	0/192	0/3.2	192	0
	Aviara – Resort Piece	0	0	30	261	261
	Aviara – Murphy	3.2/6	125	0/9.5	140	15
11	South ECR – Vons Aviara	0	0	0	0	0
Southeast						
7	Palomar Corridor	0	0	0/MU	104	104
11	South ECR – Alga Commercial	0	0	MU	31	31
	South ECR – LC Resort	0	0	9.5	58	58
	South ECR – Vons La Costa	0	0	30/MU	307	307

Notes:

- a. Net DU (Dwelling Unit) Capacity = future total capacity minus existing units
- b. Units Needed From EDUB = proposed net capacity (concepts) minus current net capacity allowed by GMCP
- c. MU Assumptions: 30% of site at 9.5 du/ac and 10% of site at 30 du/ac.

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011; SANDAG, 2011.

TABLE 5.3-5: CONCEPT B – ACTIVE WATERFRONT CAPACITY

#	FOCUS AREA	CURRENT GP GCP DENSITY	NET DU CAPACITY AT CURRENT GCP DENSITY	PROPOSED DENSITY	NET DU CAPACITY AT PROPOSED DENSITY¹	UNITS NEEDED FROM EDUB
Northwest						
1	Northwest Coastal – Village	0	0	MU-V	875	875
	Northwest Coastal – Barrio	11.5/19	57	9.5/30	740	683
	Northwest Coastal – Power Plant	0	0	0/MU	147	147
2	Plaza Camino Real & North County Plaza	0	0	0/MU	185	185
4	Marja Acres	0/3.2	0/59	0/9.5	112	53
7	Palomar Corridor	0	0	0	0	0
8	Southern Freeway	0	0	0	0	0
9	Southern Waterfront	0	0	0	0	0
Northeast						
2	Plaza Camino Real Commercial Corridor	0	0	0/30	411	411
3	Quarry Creek	0/3.2	283	0/9.5/30	893	610
5	Sunny Creek	0/ 3.2	66	0	-2	-68
6	Mandana	1	155	1	155	0
7	Palomar Corridor	0	0	0	0	0
Southwest						
7	Palomar Corridor	0	0	0	0	0
8	Southern Freeway	0	0	0/30	819	819
9	Southern Waterfront – Ponto	0/11.5	0/39	0/30/MU	251	212
10	Aviara – Poinsettia	0/3.2	0/192	0/3.2/9.5	439	247
	Aviara – Resort Piece	0	0	3.2	28	28
	Aviara – Murphy	3.2/6	125	3.2	87	-38
11	South ECR – Vons Aviara	0	0	0	0	0
Southeast						
7	Palomar Corridor	0	0	0	0	0
11	South ECR – Alga Commercial	0	0	0	0	0
	South ECR – LC Resort	0	0	0	0	0
	South ECR – Vons La Costa	0	0	30	474	474

Notes:

- a. Net DU (Dwelling Unit) Capacity = future total capacity minus existing units
- b. Units Needed From EDUB = proposed net capacity (concepts) minus current net capacity allowed by GMCP
- c. MU Assumptions: 30% of site at 9.5 du/ac and 10% of site at 30 du/ac.

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011; SANDAG, 2011.

TABLE 5.3-6: CONCEPT C – CORE FOCUS CAPACITY						
#	FOCUS AREA	CURRENT GP GCP DENSITY	NET DU CAPACITY AT CURRENT GCP DENSITY	PROPOSED DENSITY	NET DU CAPACITY AT PROPOSED DENSITY	UNITS NEEDED FROM EDUB
Northwest						
1	Northwest Coastal – Village	0	0	MU-V	875	875
	Northwest Coastal – Barrio	11.5/19	61	9.5/30/MU	716	655
	Northwest Coastal – Power Plant	0	0	0	0	0
2	Plaza Camino Real & North County Plaza	0	0	0/MU	252	252
4	Marja Acres	0/3.2	0/59	0/9.5	112	53
7	Palomar Corridor	0	0	0/MU	126	126
8	Southern Freeway	0	0	0	0	0
9	Southern Waterfront	0	0	0	0	0
Northeast						
2	Plaza Camino Real Commercial Corridor	0	0	0	0	0
3	Quarry Creek	0/3.2	283	9.5/30	649	366
5	Sunny Creek	0/ 3.2	66	0	-2	-68
6	Mandana	1	155	1	155	0
7	Palomar Corridor	0	0	0/30/MU	808	808
Southwest						
7	Palomar Corridor	0	0	0/30	225	225
8	Southern Freeway	0	0	0/9.5	259	259
9	Southern Waterfront – Ponto	0/11.5	0/39	0/MU	170	131
10	Aviara – Poinsettia	0/3.2	0/192	0/3.2/9.5	245	53
	Aviara – Resort Piece	0	0	0	0	0
	Aviara – Murphy	3.2/6	125	0/3.2	46	-79
11	South ECR – Vons Aviara	0	0	MU	125	125
Southeast						
7	Palomar Corridor	0	0	0/30	531	531
11	South ECR – Alga Commercial	0	0	0	0	0
	South ECR – LC Resort	0	0	0	0	0
	South ECR – Vons La Costa	0	0	0/MU	52	52
Notes:						
a. Net DU (Dwelling Unit) Capacity = future total capacity minus existing units						
b. Units Needed From EDUB = proposed net capacity (concepts) minus current net capacity allowed by GMCP						
c. MU Assumptions: 30% of site at 9.5 du/ac and 10% of site at 30 du/ac.						

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011; SANDAG, 2011.

5.4 Non-Residential Development and Jobs

The following tables compare non-residential and job growth across the three land use concepts. While overall non-residential development is fairly comparable across the three concepts, Concept A – Centers results in the highest non-residential square footage increase while Concept C – Core Focus the lowest. Concept B – Active Waterfront results in the highest industrial/office square footage increase due to the lack of residential, commercial, or mixed-use land uses in Palomar Corridor (Focus Area 7). Increase in hotel rooms is similar among all the concepts, while Concept A– Centers includes campus square footage and Concept C – Core Focus includes commercial recreation square footage.

Tables 5.4-1 and 5.4-2 summarize the net increase non-residential development and jobs. Table 5.4-3 and shows the reasonably expected citywide jobs at buildout. This estimate slightly differs from SANDAG projections because this estimate takes into account land availability and development constraints, and estimates growth likely to occur while SANDAG’s projections show maximum capacity as allowed by the current General Plan.

TABLE 5.4-1: NET NON-RESIDENTIAL INCREASE COMPARISON SUMMARY			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Commercial (square feet)	2,522,000	1,471,000	2,359,000
Industrial/Office (square feet)	4,419,000	4,934,000	3,437,000
Total Commercial and Industrial/Office (square feet)	7,089,000	6,405,000	5,796,000
Hotels (rooms)	2,590	2,660	2,670
Campus (square feet)	316,000	–	–
Commercial Recreation (square feet)	–	–	103,000

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011.

TABLE 5.4-2: NET JOB INCREASE COMPARISON SUMMARY			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Commercial	6,310	3,680	5,900
Industrial/Office	12,210	13,750	8,960
Hotels	1,300	1,330	1,340
Campus	1,050	–	–
Commercial Recreation	–	–	260
Citywide Total	20,870	18,760	16,460

Source: Dyett & Bhatia, 2011; City of Carlsbad Planning Department, 2011.

TABLE 5.4-3: CITYWIDE JOB ESTIMATE AT BUILDOUT COMPARISON			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Existing Jobs	61,999	61,999	61,999
Pipeline Jobs	4,310	4,310	4,310
Jobs From Concepts	20,870	18,760	16,460
Citywide Total Jobs at Buildout	87,179	85,069	82,769
a. Citywide Total Housing Jobs at Buildout = Existing + Pipeline + From Concepts (Table 5.4-2)			

Source: Dyett & Bhatia, 2011; SANDAG, 2011; Working Paper 6, 2011.

5.5 Open Space and Parks

All three land use concepts will result in substantial increase in park/open space acreage with increase ranging from 165 to 250 acres (in addition to park development efforts already underway or planned). The following tables compare open space/park acreage across the three concepts. As the inventory of current and planned parks exceed the community’s active recreational needs over the next 25 years, the three concepts envision the majority of the acreage to be special resource areas, with the exception of Concept B – Active Waterfront where a waterfront park/promenade is envisioned along the ocean in Ponto/Southern Waterfront (Focus Area 9). In Concept A– Centers, Quarry Creek (Focus Area 3) has less open space, compared to the other concepts, due to the campus land use on the southeast portion of Quarry Creek. The concepts also show varying open space on the Power Plant site in Northwest Coastal (Focus Area 1). In addition, Concepts A and C show more open space in Aviara (Focus Area 10) than Concept B – Active Waterfront. Table 5.5-1 shows that there is enough current existing and planned community park and special use area acreage in the City of Carlsbad to accommodate reasonably anticipated growth under each concept and maintain a park service level of three acres per 1,000 residents.

Figures 5.5-1 through 5.5-3 show each concept within the context of open space and park within Carlsbad. These maps show that there will continue to be a significant amount of open space and parks and the land use concepts will allow for accessibility to these spaces by placing more residents near open spaces and parks.

TABLE 5.5-1: OPEN SPACE/PARKS INCREASE COMPARISON SUMMARY			
OPEN SPACE/PARK (ACRES)	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Northwest	50.2	57.1	56.9
Northeast	68.8	101.3	101.3
Southwest	46.4	91.3	40.6
Southeast	–	–	–
Citywide Total	165.4	249.7	198.8

Source: Dyett & Bhatia, 2011.

TABLE 5.5-2: BUILDOUT PARK NEEDS COMPARISON SUMMARY			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Total Population Estimate	122,428	122,303	121,802
Park Acres Needed	367	367	365
Existing and Planned Parks (acres)	414	414	414
Active Park Proposed In Plan	–	77	–
Future Surplus	47	124	49
Notes:			
a. Existing and Planned Parks include Community Parks and Special Use Areas			
b. Total Population Estimate from Table 5.2-4.			

Source: Dyett & Bhatia, 2011; Working Paper 3, 2011; SANDAG, 2011.

TABLE 5.5-3: BUILDOUT PARK NEEDS COMPARISON BY QUADRANT			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Northwest			
Total Population Estimate	34,466	34,441	34,466
Park Acres Needed	103	103	103
Existing and Future Planned Parks	116	116	116
Active Park Proposed in Concept	–	–	–
Future Surplus (or Deficit)	13	13	13
Northeast			
Total Population Estimate	18,336	18,011	18,411
Park Acres Needed	55	54	55
Existing and Future Planned Parks	67	67	67
Active Park Proposed in Concept	–	–	–
Future Surplus (or Deficit)	12	13	12
Southwest			
Total Population Estimate	29,164	29,465	28,288
Park Acres Needed	87	88	85
Existing and Future Planned Parks	96	96	96
Active Park Proposed in Concept	–	77	–
Future Surplus (or Deficit)	9	85	11
Southeast			
Total Population Estimate	40,461	40,386	40,636
Park Acres Needed	121	121	122
Existing and Future Planned Parks	135	135	135
Active Park Proposed in Concept	–	–	–
Future Surplus (or Deficit)	14	14	13
Note:			
a. Existing and Planned Parks include Community Parks and Special Use Areas			
b. Total Population Estimate from Table 5.2-4			

Source: Dyett & Bhatia, 2011; Working Paper 3, 2011; SANDAG, 2011.

Figure 5.5-1: Concept A: Centers – Open Space



Figure 5.5-2: Concept B: Active Waterfront – Open Space



Figure 5.5-3: Concept C: Core Focus – Open Space



5.6 Job/Housing Balance

Jobs-housing balance refers to the condition in which a single community offers an equal supply of jobs and employed residents. In reality, even if there were to be a perfect balance, in- and out-commuting would still result as the match of education, skills, and interests is not always accommodated within the boundaries of one community. Carlsbad has more jobs than employed residents, reflecting the city's stature as an employment center in North San Diego County, as well as housing that is more expensive than in inland communities. All three land use concepts will result in the city continuing with a slight surplus of jobs into the future, with the jobs/employed residents' ratio varying from 1.2 to 1.3 between the concepts.

TABLE 5.6-1: CITYWIDE JOB AND DWELLING UNIT COMPARISON

	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Citywide Total Jobs at Buildout	87,179	85,069	82,769
Citywide Total Housing Units at Buildout	48,888	48,838	48,638
Employed Residents at Buildout	68,443	68,373	68,093
Jobs/Employed Residents	1.3	1.3	1.2

Source: Dyett & Bhatia, 2011; SANDAG, 2011; Working Paper 6, 2011.

5.7 Livability and Sustainability

Although sustainability and livability are only two of the Carlsbad Community Vision core values, in a certain sense they underlie almost all of the core values. For instance, one core value urges the city to “prioritize protection and enhancement of open space and the natural environment,” while another seeks to “promote active lifestyles and community health by furthering access to trails, parks, beaches, and other recreational opportunities.” These core values are environmental and social sustainability priorities and contribute to the overall livability of a city.

Another core value seeks to “increase travel options through enhanced walking, bicycling and public transportation systems,” and to “enhance mobility through increased connectivity and transportation management.” This core value supports social sustainability and livability by increasing access for people of all incomes and physical abilities, and it supports environmental sustainability by helping reduce car trips and their associated emissions, and increase trips on foot, by bicycle, and by public transportation.

This section compares the land use concepts in the context of sustainability and livability measures.

Linking Land Use and Multi-modal Opportunities

As discussed in Working Paper 5, local access to transit, bicycle and pedestrian facilities can be enhanced through a number of means focused on good land use design and the principles of “smart growth.” Smart growth is characterized by more compact, higher-density development in an area that is walkable, near transit and promotes good community design. Smart growth focuses future growth and in-fill development close to jobs, services and public facilities to maximize the use of existing infrastructure and preserve open space and natural resources. The objective is to provide more housing and transportation choices for those who live and work in these areas. At the regional level, SANDAG is promoting the concept of smart growth as a means of reducing automobile dependence, promoting the use of alternative travel modes and reducing greenhouse gas emissions. Within Carlsbad, SANDAG has identified four Smart Growth Opportunity Areas including:

- Plaza Camino Real at State Route 78 (SR 78) and El Camino Real;
- Quarry Creek Area at Marron Road, west of College Blvd and south of SR 78;
- Carlsbad Village COASTER Station, including Village Redevelopment and Barrio areas at Grand Avenue and State Street; and
- Ponto Beachfront at Avenida Encinas and Ponto Drive at Carlsbad Boulevard.

Linking land use and multi-modal opportunities through well planned transportation systems can improve personal mobility and accessibility while encouraging healthy physical activity and providing high levels of safety, comfort and convenience.

Smart Growth Area One: Plaza El Camino Real and El Camino Real

All three land use concepts include a Mixed Use designation for Plaza Camino Real Commercial Corridor (Focus Area 2). Concept A – Centers designates the entire site west of El Camino Real as Mixed Use while Concepts B and C only allow a portion of the site west of El Camino Real for Mixed Use. Therefore Concept A – Centers offers the most opportunity for housing on that portion of Plaza Camino Real Commercial Corridor. For the area east of El Camino Real, concepts A and B allow for housing while Concept C – Core Focus only allows for commercial uses. For the entire Plaza Camino Real Corridor, Concept B – Active Waterfront has the highest new residential development potential with 480 units. Concept A – Centers has the next highest with 430 units while Concept C – Core Focus has the lowest with 180 units.

In terms of development along El Camino Real, Concept A – Centers has the most new residential development potential along El Camino Real with 1,230 units. Concept B – Active Waterfront has the second highest new residential development potential with 500 units and Concept C – Core Focus has the lowest with 360 units.

Smart Growth Area Two: Quarry Creek

All three land use concepts include medium density and high density residential uses for Quarry Creek (Focus Area 3). Concept B – Active Waterfront has the highest new residential development potential with 650 units. Concept A – Centers has the second highest new residential development potential with 520 units; however Concept A – Centers also includes campus use for Quarry Creek which would offer the benefit of placing potential jobs close to new residential uses. Concept C – Core Focus has the lowest new residential development potential with 470 units.

Smart Growth Area Three: Village and Barrio

New residential development potential for the Village (Northwest Coastal/Focus Area 1) is similar among all three of the land use concepts. However, in the Barrio (Northwest Coastal/Focus Area 1), Concept B – Active Waterfront has the highest new residential development potential followed by Concept C – Core Focus, with Concept A – Centers having the lowest new residential development potential.

Smart Growth Area Four: Ponto Beachfront

All three land use concepts include residential uses for Ponto/Southern Waterfront (Focus Area 9). In Concept A – Centers, Ponto/Southern Waterfront includes high density residential and commercial uses, with a new residential development potential of 200 units. Concept B – Active Waterfront includes mixed use, high density residential and commercial uses, resulting in a new residential development potential of 470 units. In Concept C – Core Focus, the entire site is designated mixed use, resulting in a new residential development potential of 150 units.

Accessibility to Shops and Services in Neighborhoods

Neighborhood-serving shops include grocery stores, restaurants, retail stores, cafés and other businesses that serve the daily needs of local residents. In traditional small town design, residents can access shops and services on foot. This has the added benefit of promoting interactions between community members as they walk between destinations. In Carlsbad, residents are more likely to drive to shopping centers. Working Paper 6 includes an analysis of residents’ reasonable walking distances to shopping services. As summarized in Working Paper 6, about 10 percent of residents live within a five-minute walk of some shopping amenities and about half (51 percent) of residents reside within a 10-minute walking distance.

However, proximity to neighborhood centers does not mean that walking is productive, feasible or safe. The closest neighborhood shopping center might not offer the kinds of daily services households require, such as a pharmacy, grocery store or dry cleaner, but residents might walk to a neighborhood café or restaurant. Residents also may choose to drive because walking is challenging due to changes in topography, missing sidewalks and lack of pedestrian connections and amenities between residences and local shopping centers, as well as the challenge of walking with shopping bags. Walking to local shops can become a reality only if shops and residential areas prioritize walkable connections between shops and homes at the conceptual design phase.

Concept A – Centers builds on the premise of neighborhood centers and focuses on the continued growth of existing neighborhood centers while establishing new neighborhood centers in strategic locations throughout the city. These neighborhood centers place residential and non-residential uses adjacent to each other, making it easier to prioritize connections between the two uses which make walking more of a reality.

Concept B – Active Waterfront also establishes residential and non-residential uses in proximity to each other but locates those areas along the waterfront. Concept C – Core Focus focuses on creating a larger center in the core of the city, with closer proximity between stores, jobs, and residential uses.

Accessibility to Shops and Services in Employment Areas

The employment area in Carlsbad is highly car-oriented, with large-scale developments primarily accessed by Palomar Airport Road. Buildings are typically large-footprint structures (sometimes up to 600 feet in length) of one to two stories, with up to three stories in newer office and industrial buildings. Building entrances face parking lots and landscaped setbacks typically separate the front building façade from the street. There are few basic commercial services within these employment areas (e.g. dry cleaners, salons, places for lunch), so most employees in this area must drive for all personal services. Moreover, although there are sidewalks along this corridor, distances between most destinations are too far apart to make walking a realistic transportation option. Additional services, small central plazas or parks, and better connections to them could reduce driving needs, promote interaction, and improve overall quality of life.

Concept C – Core Focus establishes a focus on the core of Carlsbad which is the city’s main employment area (Palomar Corridor/Focus Area 7). Concept C – Core Focus aims to provide commercial services and housing opportunities within the core, creating an opportunity for people to live close to jobs and services. Concept C places residential uses around the employment core to avoid land use conflicts that may arise with McClellan-Palomar Airport. Concept C – Core Focus also includes mixed use and commercial areas within the core.

Concept A – Centers also establishes some mixed use and high density residential around the periphery of the core while Concept B – Active Waterfront maintains Palomar Corridor as a strictly employment area.

Activity Nodes and Destinations

In this larger city composed of smaller, intimate neighborhoods, activity centers and religious facilities function as communal nodes where residents, workers and visitors connect. Events and activities provide opportunities for families to spend time together, friends to meet, and community members to mingle. As a beach town, the waterfront is an ideal location for activity nodes and as a community destination for residents. However, unlike other beach towns, Carlsbad State Beach is not equipped with typical beach town amenities such as an active waterfront street. Though the promenade and the beach remain popular destinations, they lack adjoining waterfront activities—places where people can eat, shop and passively connect with the ocean while taking in the views of the sand, water and sunset. During the Envision Carlsbad Phase 1 process, community members voiced concerns over diminished beach town character due to lack of waterfront activities. They are seeking opportunities to engage with other residents and amenities that serve their needs.

Concept B – Active Waterfront focuses on creating an active waterfront, identifying opportunities to create waterfront activities along the coast. The Power Plant site (Northwest Coastal/Focus Area 1) and several sites along the coast in Ponto/Southern Waterfront (Focus Area 9) show commercial uses to accommodate a cluster of active uses such as restaurants, gathering spaces, shops and cafes. Concept B – Active Waterfront also capitalizes on the proposed Carlsbad Boulevard realignment project and property exchange with State Parks, which serves as an important opportunity to improve coastal access and waterfront amenities. The realignment of Carlsbad Boulevard has the potential to yield excess property that could facilitate expansion of the Carlsbad State Beach campgrounds and/or provide for other recreational facilities and desirable community amenities. A waterfront park/promenade can help provide physical and social connectivity and become a city destination.

Concepts A and C also envision active commercial uses on the Power Plant site (Northwest Coastal/Focus Area 1) but would not allow housing on the site. Concepts A and C do not envision a significant change for the Carlsbad State Beach campgrounds but do envision Ponto/Southern Waterfront (Focus Area 9) as an active area with commercial and residential uses.

Accessibility to Parks and Open Space

Working Paper 3 includes a walking distance analysis to Community Parks and Special Use Areas, where actual walkable distances along roadways are indicated using data about Carlsbad’s roadway network. Figure 5.7-2 shows the walking analysis buffers. Table 5.7-1 and 5.7-2 show, with the completion of planned improvements, the proposed residential areas within five and 10 minute walks of parks and special use areas for each land use concept.

Table 5.7-1 shows that all concepts will provide similar walking access to parks, although Concept A – Centers will have the most amounts of residential areas within a five minute walk (1/4 mile walking distance) of parks. Another consideration in an accessibility analysis is that park accessibility is closely related to population and housing density. In less dense communities or neighborhoods, a given acreage of parks per 1,000 residents will mean fewer people within walking distance than would be possible in more dense communities or neighborhoods. Concept C – Core Focus places the most high density residential areas (approximately 52 acres) within a five minute walk of parks. Overall, Concept C will place approximately 2,280 new residents within a five minute walk of parks, while Concept A – Centers will place 2,180 and Concept B – Active Waterfront will place 2,200 new residents within a 5-minute walk.

Table 5.7-2 shows comparable accessibility between alternatives for 10-minute walk (1/2 mile walking distance) from parks, with Concept C – Core Focus accommodating slightly more residents within a 10-minute walk of parks than the other concepts—Concept C – Core Focus will locate approximately new 2,940 residents within a 10-minute walk of parks while Concept B – Active Waterfront will locate 2,910 and Concept A – Centers will locate 2,800 new residents within a 10-minute walk.

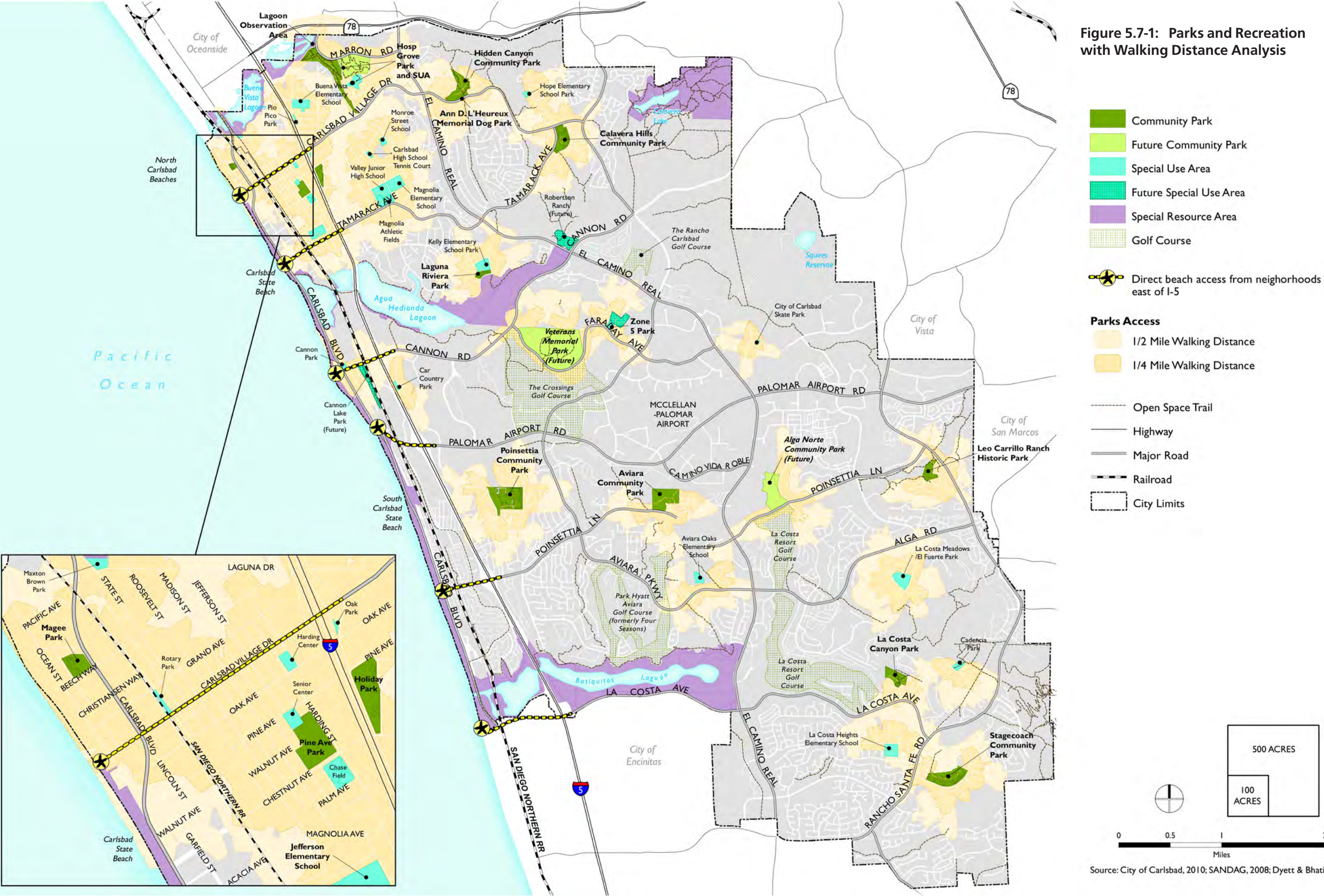
TABLE 5.7-1: PARK ACCESSIBILITY BY RESIDENTIAL LAND USE – 1/4 MILE WALKING DISTANCE ANALYSIS COMPARISON			
CONCEPT RESIDENTIAL LAND USE	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Very Low Density Residential (acres)	0	0	0
Low Density Residential (acres)	0	0	0
Medium Density Residential (acres)	25	22	25
High Density Residential (acres)	33	42	43
Mixed Use (acres)	188	156	163
Total Acres	246	220	231

Source: Dyett & Bhatia, 2011; Working Paper 3, 2011.

TABLE 5.7-2: PARK ACCESSIBILITY BY RESIDENTIAL LAND USE – 1/2 MILE WALKING DISTANCE ANALYSIS COMPARISON			
CONCEPT RESIDENTIAL LAND USE	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Very Low Density Residential (acres)	0	0	0
Low Density Residential (acres)	8	2	10
Medium Density Residential (acres)	27	34	30
High Density Residential (acres)	47	62	52
Mixed Use (acres)	237	182	238
Total Acres	318	280	329

Source: Dyett & Bhatia, 2011; Working Paper 3, 2011.

Figure 5.7-1: Parks and Recreation with Walking Distance Analysis



5.8 Traffic and Circulation

As outlined in Section 5.7 Livability and Sustainability, the walking, biking, public transportation and connectivity core value vision statement is to “increase travel options through enhanced walking, bicycling and public transportation systems” and to “enhance mobility through increased connectivity and transportation management.” Section 5.7 evaluates linking land uses and multi-modal opportunities as well as accessibility to shops/services in neighborhoods and employment areas, the creation of activity nodes and destinations, and accessibility to parks and open spaces. As Section 5.7 assesses the support of intermodal integration through land use strategies, this section provides additional analysis regarding land use concept impacts on the roadway system and the overall accessibility of residents and employees to transit, bicycle, and pedestrian facilities.

The three land use concepts were converted into the format necessary for incorporation into the San Diego Association of Governments’ (SANDAG) recently updated travel demand model. A model run was conducted for each concept by SANDAG. Additional metrics, estimates developed by Fehr & Peers, and GIS mapping were used to assess transportation performance for the concepts. The purpose of this analysis was to conduct a comparative assessment and describe the overall transportation effects of the concepts, and to provide this information to decision-makers and the public as they consider the benefits and disadvantages of each alternative.

While the new SANDAG model is calibrated at the regional scale, it is still in the process of being refined to enable assessment of performance of individual roadway segments and intersections. A much more detailed evaluation of transportation impacts will be conducted when the preferred concept for the General Plan is identified. This will include evaluation of traffic levels of service (LOS) for roadways and intersections, and identification of improvements, and will form the basis for the transportation chapter of the General Plan Environmental Impact Report.

Vehicular Travel

The majority of trips in Carlsbad are made by automobile. The conditions and operations on a roadway network built for the automobile can affect the community’s quality of life, livability, sustainability, as well as, resident’s ability to carry out day-to-day activities. However, the community also expresses a desire to reduce dependence on the automobile by promoting and utilizing alternative travel modes. As bus transit, bicycle, and pedestrian movement rely on the same roadway network as automobiles, the goal of maintaining an efficient and balanced roadway system is beneficial to the City’s overall circulation, and relieving congestion is beneficial to air quality as well. Sometimes decisions for one mode of travel can have substantial consequences on the use of other modes of transportation. For example, the City of Carlsbad has historically built most of its roadways and intersections for the peak demand of automobiles, but by adding a right turn lane or two right-turn lanes to an approach at an intersection we create 12 to 28 more feet for a pedestrian to cross the intersection in a crosswalk. And pedestrians include all individuals of every age and ability. State and Federal regulations are now requiring local jurisdictions to give pedestrians more time to cross an intersection which impact automobile drivers negatively with delays at the very intersection that the city historically tried to design to have less congestion by adding the turn lanes. A good comparison of intersections that serve different modes of transportation differently would be Carlsbad Boulevard/Carlsbad Village Drive and Palomar Airport Road/El Camino Real. As discussed above, without a refined and calibrated model, intersection and roadway LOS, which is a measure used to describe the condition of traffic flow, cannot be accurately forecasted at this point of the process. However, total vehicle trips and vehicle miles traveled can be analyzed to evaluate how often people drive and how far they drive on average in each land use concept scenario.

Vehicle Trips and Vehicle Miles Traveled

Several factors impact how often people get into their cars to drive somewhere and how far they drive. As discussed in Section 5.7, smart growth can reduce automobile dependence, the number of trips taken using a car, and the distances people drive. By placing a mix of land uses close together, travel characteristics can shift. For example, by having residential and retail uses close together, people can walk to the corner store from their homes, thereby reducing vehicle trips. However, the larger the width of the street and the size of the parking lot between the sidewalk and the corner store, the less desirable it is to choose walking as a travel option. Therefore, the built environment can impact travel option choices. Or by placing residential uses close to employment uses, people may not have to drive as far to get to work, and some people may walk or bike. Lower automobile vehicle trips and vehicle miles traveled can translate into less congestion and lower greenhouse gas emissions.

Methodology

Vehicle trips were estimated for the city using Concept B – Active Waterfront and the SANDAG travel demand forecasting model. Vehicle trips for Concepts A – Centers and Concept C – Core Focus were estimated by comparing the land use projections and estimating the difference in total trips generated by each land use using SANDAG trip generation rates.

Vehicle miles traveled (VMT) was calculated using the “boundary” method. This method multiplies the traffic volume on roadways within the Carlsbad city limits by the length of the roadway to obtain VMT. Future VMT assessment for the General Plan effort will be more refined, accounting for only VMT for trips that start or end in the city (that is, it will exclude trips that simply pass through the city or start someplace else and end in the city or vice versa). VMT was calculated for the entire city as the total VMT for Concept B – Active Waterfront utilizing the SANDAG travel demand forecasting model. VMT for Concept A – Centers and Concept C – Core Focus was estimated by multiplying the net new trip generation estimates for each concept by the average trip length (disaggregated by trip purpose).

Vehicle Trips and Vehicle Miles Traveled Comparison

Table 5.8-1 summarizes the total vehicle trips and VMT generated by each land use concept within the City of Carlsbad. As the table shows, the total vehicle trips and the VMT resulting from the three land use concepts are fairly similar. The vehicle trip difference between the lowest (Concept B – Active Waterfront) and highest (Concept C – Core Focus) is six percent. Concepts A – Centers and Concept C – Core Focus are generally consistent with Concept B – Active Waterfront VMT estimates, as they generate 1.8 percent and 2.8 percent more VMT (compared to Concept B – Active Waterfront), respectively.

Looking at the vehicle trip and VMT per service population, Concept C – Core Focus has the highest vehicle trips and VMT per service population (jobs and population combined) while Concept B – Active Waterfront has the lowest. However, in general, the three land use concepts perform similarly related to vehicle trips and VMT comparison per service population and household basis. This shows that although the land use strategies differ among the land use concepts, the resulting vehicle trips and VMT at the citywide scale are similar. So although Concept B – Active Waterfront may not have mixed use in the Palomar Corridor (Focus Area 7), concentrating development along the coast will have similar impacts as providing for mixed use in the Palomar Corridor as Concept C – Core Focus does. And while Concept A – Centers designates neighborhood centers throughout the city, this land use strategy also results in similar impacts.

Section 5.9 Environmental Impacts includes a comparison of greenhouse gas emissions resulting from the associated VMT for each land use concept. Performance of roadway and intersection levels of service will be conducted during the next stage of the process, as a Preferred Plan is defined and the SANDAG model calibration for local roadways is completed.

TABLE 5.8-1: CITYWIDE VEHICLE TRIPS AND DAILY VEHICLE MILES OF TRAVEL (VMT)			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Service Population (Population + Jobs)	209,607	207,372	204,571
Total Population	122,428	122,303	121,802
Total Jobs	87,179	85,069	82,769
Total Housing Units	48,888	48,838	48,638
Vehicle Trips	762,917	736,991	781,345
Vehicle Trips Per Service Population	3.64	3.55	3.82
VMT	5,368,642	5,273,266	5,419,900
VMT per Household	110	108	111
VMT per Service Population	25.6	25.4	26.5

Source: SANDAG and Fehr & Peers, 2012.

Alternative Travel Modes

Achieving the Carlsbad core value of multi-modal mobility and increased share of transit, bicycle, and pedestrian trips will require land use and transportation to be closely integrated, so, for example, people can conveniently and safely walk to a transit stop or bike to work.

Transit Accessibility

It has been shown that a higher percentage of people are likely to use transit if they can walk to a station or bus stop and the service is frequent and dependable. Thus, to estimate each land use concept’s general supportiveness of transit, new service population was identified within a five minute walk (1/4 mile walking distance) of existing transit stops for each land use concept. As shown in Table 5.8-2, Concept A – Centers will result in the greatest number of new residents and jobs within a five minute walk of transit stops. Because Concept A – Centers directs development of neighborhood centers in strategic locations along transit, new growth will occur in proximity to existing popular transit stops. As shown in Figure 2.2-3, the top 20% ridership transit stops are predominantly located along El Camino Real, Plaza Camino Real Corridor (Focus Area 2), and around the Palomar Corridor (Focus Area 7), and Concept A – Centers would place the most residential and job opportunities within walking distance of those transit stops. Concept B – Active Waterfront and Concept C – Core Focus would result in slightly less service population within a

TABLE 5.8-2: NEW SERVICE POPULATION WITHIN ¼ MILE OF AN EXISTING TRANSIT STOP			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Population	10,300	10,400	9,700
Jobs	20,100	18,700	18,800
Service Population (Population + Jobs)	30,400	29,100	28,500

Source: Dyett & Bhatia, 2011; SANDAG, 2011; Fehr & Peers, 2011.

five minute walking distance from transit stops, although in the case of Concept B – Active Waterfront, there would be greater increase in population close to the city’s two Coaster stations since it focuses growth along the coast.

Non-Vehicular (Bicycle and Pedestrian) Accessibility

Most major arterial roadways within the city—including Carlsbad Boulevard, Carlsbad Village Drive, El Camino Real, Palomar Airport Road and La Costa Avenue—have bicycle facilities. These facilities provide direct routes for cyclists that may be comfortable with riding on relatively high volume roadways, and the degree of success in encouraging new cyclists will depend on the ease of accessing these bicycle facilities.

To estimate the distances of new population and jobs from existing bicycle facilities, new service population was identified within ¼ mile (five minute walk, or one minute bicycling) of existing bicycle facilities for each land use concept. The proximity to existing bikeway facilities means that there will be less need to navigate areas without bicycle lanes in order to access the bicycle network. As shown in Table 5.8-3, Concept A – Centers will result in the greatest number of new residents and jobs within ¼ mile of an existing bicycle facility. Because Concept A – Centers directs development of neighborhood centers in strategic locations along transit, where bicycle facilities are currently located, new growth will occur close to bicycle facilities. Concept B – Active Waterfront and Concept C – Core Focus would result in slightly less service population within a five minute walking distance from bicycle facilities.

TABLE 5.8-3: NEW POPULATION WITHIN ¼ MILE OF AN EXISTING BICYCLE FACILITY			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Population	14,400	13,100	13,300
Jobs	24,900	23,800	23,700
Service Population (Population + Jobs)	39,300	36,900	37,000

Source: Dyett & Bhatia, 2011; SANDAG, 2011; Fehr & Peers, 2011.

The promotion of non-vehicular access is also dependent on the promotion of land use patterns that decrease distances between destinations. As discussed in Section 5.7, Concept A – Centers builds on the premise of neighborhood centers and focuses on continued growth of existing neighborhood centers while establishing new neighborhood centers in strategic locations throughout the city. Because the neighborhood centers place residential and non-residential uses adjacent to each other, it is much easier to prioritize bike and pedestrian connections among the uses, making non-vehicular travel more of a reality. Concept B – Active Waterfront focuses growth and creating activity nodes and destinations along the coast. By focusing growth in close proximity to pedestrian and bicycle attracting land uses such as the coastline, Concept B – Active Waterfront aims to minimize the distances between residents and destinations that attract a lot of people (tourists and locals) and focuses growth in areas where it is easiest to walk and bike around in. Concept C – Core Focus directs growth to the center of the city. By providing commercial and housing opportunities within the core, Concept C – Core Focus aims to promote bicycle and pedestrian accessibility in a highly car-oriented part of the city, reducing the need for workers to get into their cars to run errands during lunchtime and creating shorter bike commutes between home and work.

5.9 Environmental Impacts

The following section evaluates the overall effects of each land use concept on environmental resources, including natural resource communities, potential safety conflicts such as with airport land uses, noise impacts and greenhouse gas (GHG) emissions.

A more detailed analysis and discussion of environmental impacts will be included in the Environmental Impact Report for the General Plan update.

Natural Resource Communities

The opportunity sites in all three land use concepts are infill sites that lie outside of existing Habitat Management Plan (HMP) hardline conservation areas, which are areas established to preserve and protect sensitive biological resources within the City of Carlsbad. Although the opportunity sites are outside of existing HMP hardline conservation areas, some opportunity sites may include biological resources, such as native habitat, wetland habitat, sensitive species or function as segments of wildlife movement corridors, though some of these areas are categorized as disturbed habitat.

As the opportunity sites are similar across the three land use concepts, the amounts of urbanized area and development that will occur in all three land use concepts are similar. In addition, the amounts of urbanized area in the three land use concepts do not differ much from what the current General Plan designates for development. The three land use concepts do, however, include strategies that recognize areas that may include potential biological resources and designates these areas as open space. For example, the areas along Agua Hedionda Lagoon along the Power Plant site (Focus Area 1) and north of the Lagoon are designated as open space in the three land use concepts. In addition, much of the area in Quarry Creek (Focus Area 3) is designated as open space in the three land use concepts compared to the current General Plan which designates most of Quarry Creek as Low-Medium Density Residential.

For comparison purposes, the follow describes potential impacts that may occur as a result of the land use concepts. These calculations are conservative estimates based on regional vegetation data provided by SANDAG in 2003. The vegetation map is currently being updated by the City of Carlsbad, upon which the Preferred Plan and draft General Plan may be evaluated against for a more accurate impact on vegetation.

Concept A – Centers could impact approximately 559 acres of vegetation, including Grassland, Coastal Sage Scrub, Chaparral (Undifferentiated Types), Southern Maritime Chaparral, Oak Woodland, Eucalyptus Woodland, Riparian Scrub, Woodland and Forest, Marsh, Estuarine, Freshwater and Other Wetlands; of these, approximately 176 acres are categorized as disturbed habitat. Concept B – Active Waterfront could impact approximately 539 acres of vegetation, including Grassland, Coastal Sage Scrub, Chaparral (Undifferentiated Types), Southern Maritime Chaparral, Oak Woodland, Eucalyptus Woodland, Riparian Scrub, Woodland and Forest, Marsh, Estuarine, Freshwater and Other Wetlands; of these, approximately 187 are categorized as disturbed habitat. Concept C – Core Focus could impact approximately 532 acres of vegetation, including Grassland, Coastal Sage Scrub, Chaparral (Undifferentiated Types), Southern Maritime Chaparral, Oak Woodland, Eucalyptus Woodland, Riparian Scrub, Woodland and Forest, Marsh, Estuarine, Freshwater and Other Wetlands; of these approximately 182 acres are categorized as disturbed habitat.

All three land use concepts could result in a disturbance of a similar amount of undisturbed habitat, with Concept C – Core Focus resulting in slightly less impact to natural vegetation.

Airport Safety

The most recent McClellan-Palomar Airport Land Use Compatibility Plan (ALUCP) was adopted in January 2010 and last amended in December 2011. The ALUCP promotes compatibility between the McClellan-Palomar Airport (airport) and land uses that surrounded the airport. The ALUCP establishes safety zones to evaluate safety

compatibility between land uses and runway configurations. Each safety zone has residential compatibility criteria and Safety Zone 6 is the only zone that allows new higher density residential development as “compatible.” None of the three land use concepts propose residential uses within Safety Zones 1 through 5; therefore none of the concepts conflict with safety criteria in the ALUCP.

Each safety zone also has non-residential compatibility criteria. A few industrial/office opportunity sites are within Safety Zones 3 and 4. The ALUCP considers industrial/office uses as conditionally acceptable and establishes floor area limits for specific industrial/office uses. Therefore adherence to the conditions established in the ALUCP will ensure compliance with safety criteria in the ALUCP.

For comparison purposes, Concept B – Active Waterfront would result in the least amount of impacts associated with ALUCP compatibility because it does not propose any increases in intensity or changes in land use within the Palomar Corridor (Focus Area 7).

Noise

The main noise sources within the City of Carlsbad are transportation and airport noise. Depending on location, the main source of noise can be from the airport, traffic along major thoroughfares or the rail line.

The ALUCP includes noise contours for the purpose of evaluating noise compatibility of land uses near the airport. According to the ALUCP, residential uses are not compatible in areas greater than 65 dB CNEL. In all three land use concepts, no residential uses are proposed in the 65+ dB CNEL range. Concepts A – Centers and Concept C – Core Focus propose residential uses near the airport (Palomar Corridor/Focus Area 7) and although they are in noise compatible locations, they may still be impacted by airport noise. Potential mitigations could include sound attenuation design measures such as the installation of sound rated windows and policies establishing a maximum interior noise level for sensitive uses to mitigate noise impacts.

Concept C – Core Focus, which focuses on creating housing opportunities near jobs in the Palomar Corridor (Focus Area 7), will place the highest number of residential units near the airport. Concept A – Centers also places some residential uses in the Palomar Corridor (Focus Area 7), though resulting in fewer number of residential units compared to Concept C – Core Focus. Concept B – Active Waterfront maintains industrial/office uses in the Palomar Corridor (Focus Area 7) which are generally compatible with airport noise levels.

High traffic volumes along main roads also result in potential noise impacts. Concept A – Centers, which focuses on creating neighborhood centers along major thoroughfares to enable access to transit and bicycle amenities would place residential uses along El Camino Real and Palomar Airport Road. Concept C – Core Focus also includes some residential uses along El Camino Real and Palomar Airport Road but less compared to Concept A – Centers. Concept C – Core Focus would not locate any residential uses along Palomar Airport Road but does include some residential uses along El Camino Real.

Other sources of noise include faster moving traffic along Interstate 5 and Highway 78, and the rail line that runs parallel to Interstate 5. Concept B – Active Waterfront, which places the most amounts of residential uses on the west side of the city, will experience the most noise impact from these sources. Concept B – Active Waterfront, which aims to create an active waterfront by placing people close to the waterfront and increasing access to rail service, places higher density residential uses along the rail line so that people can easily walk to the stations. Concept B – Active Waterfront includes residential uses on the Power Plant site (Northwest Coastal/Focus Area 1) as well as high density residential in Southern Freeway Corridor (Focus Area 8) close to the rail station. In addition, Concept B – Active Waterfront also includes high density residential in Plaza Camino Real Commercial Corridor (Focus Area 2) and Quarry Creek (Focus Area 3).

Concepts A - Centers and Concept C – Core Focus do not include residential uses on the Power Plant site (Northwest Coastal/Focus Area 1) and includes less dense residential uses in Southern Freeway Corridor (Focus Area 8), Plaza Camino Real Commercial Corridor (Focus Area 2) and Quarry Creek (Focus Area 3).

Greenhouse Gas Emissions

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere and consist of, but are not limited to, carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). These three gases are the most common GHGs that result from human activity. The global warming potential of GHGs is expressed in terms of CO2 equivalents (CO2e) and is typically quantified in metric tons (MT) or millions of metric tons (MMT).

Human activities have elevated GHG concentrations beyond naturally-occurring levels. While not explicitly emphasized in the Carlsbad Community Vision, GHGs are closely related to the sustainability priorities expressed in the Sustainability core value. For example, higher GHG emissions indicate increased energy use, thereby conflicting with the energy security community value. In addition, higher GHG emissions that increase global temperatures can impact ecosystems, changing the length of growing season or shifting plant hardiness zones, which conflict with the healthy and sustainable food community value. Furthermore, increase in temperatures has placed pressure on the state’s water supplies due to less precipitation and premature runoff of snowpack and rainwater.

According to the 2005 City of Carlsbad Greenhouse Gas Emissions Inventory, the transportation sector was the largest emitter (64 percent) of GHGs in 2005. Due to this fact and the available data at this stage of the process, the three land use concepts were evaluated based on the GHG emissions resulting from vehicles driving within the city. Table 5.9-1 shows the resulting GHG emissions for each land use concept. Because Concept B – Active Waterfront results in the lowest vehicle miles traveled (VMT), as explained in Section 5.8 Traffic and Circulation, the resulting GHG emissions are also the lowest. However, when comparing GHG emissions per service population (population and jobs), Concept B – Active Waterfront and Concept A – Centers both result in 3.4 MT of CO2e, while Concept C – Core Focus results in a slightly higher CO2e per Service population (3.5 MT). This means that Concept A – Centers and Concept B – Active Waterfront do a slightly better job at accommodating growth without as much GHG impact as Concept C – Core Focus.

TABLE 5.9-1: TRANSPORTATION GHG EMISSION ESTIMATES COMPARISON			
	CONCEPT A – CENTERS	CONCEPT B – ACTIVE WATERFRONT	CONCEPT C – CORE FOCUS
Daily VMT	5,368,642	5,273,266	5,419,900
Daily Metric Tons CO2E	1,970.85	1,935.83	1,989.66
Yearly Metric Tons CO2E	719,360.25	706,577.95	726,225.90
Service Population (Jobs + Population)	209,607	207,372	204,571
Metric Tons CO2E per Service Population	3.4	3.4	3.5

Source: Dudek, 2012; CARB, 2011; EPA, 2005.

A more detailed greenhouse gas analysis will be conducted as part of the General Plan update and EIR process. The 2005 City of Carlsbad Greenhouse Gas Emissions Inventory summarized GHG emissions for the following five sectors: residential; commercial/industrial; transportation; solid waste; and wastewater, and future GHG emissions will be projected for each of these sectors. Below is a short discussion of the regulatory framework addressing GHGs. A more detailed discussion regarding GHGs can be found in Working Paper 1. A short description regarding the methodology used to project GHG emissions for the three land use concepts is also included below.

Regulatory Context

In 2006, California passed Assembly Bill 32, the Global Warming Solutions Act, which requires that statewide greenhouse gas emissions be reduced to 1990 levels by the year 2020. Senate Bill 375, the Sustainable Communities and Climate Protection Act of 2008, requires the California Air Resources (CARB) to develop regional greenhouse gas emission reduction targets and for SANDAG to prepare a Sustainable Communities Strategy that demonstrates how the region will meet its reduction target through integrated land use, housing and transportation planning. SANDAG has prepared a Climate Action Strategy (March 2010) to identify land use and transportation policy measures that could help SANDAG meet or exceed Senate Bill 375 targets.

Methodology

Vehicle miles traveled (VMT) is used as a key factor to calculate greenhouse gas emissions in the transportation sector. Utilizing the total VMT for each land use concept, CO2 emissions from motor vehicle trips were quantified using the EMFAC 2011 model, which is the Air Resources Board’s tool for estimating emissions from on-road vehicles.¹ Methane (CH4) and nitrous oxide (N2O) emissions were accounted for by multiplying the EMFAC 2011 CO2 emissions by a factor based on the assumption that CO2 represents 95% of the CO2-equivalent (CO2e) emissions associated with passenger vehicles.²

1 CARB (California Air Resources Board). 2011. Mobile Source Emission Inventory – Current Methods and Data. Accessed January 3, 2011 at: http://www.arb.ca.gov/msei/modeling.htm#emfac2011_web_based_data

2 EPA (U.S. Environmental Protection Agency). 2005. Greenhouse Gas Emissions from a Typical Passenger Vehicle (EPA420-F-05-004). EPA Office of Transportation and Air Quality. February 2005. Accessed at <http://www.epa.gov/otaq/climate/420f05004.pdf>

5.10 Fiscal Impacts

Fiscal Impacts of Future Growth

One of the many considerations of community development is the resulting impact on a city’s general fund. While residents and businesses bring revenue to a city, they also require service provision, which increases city costs. Developing a thoughtful balance between types of development is a key consideration when planning for adequate service delivery, which helps ensure a high quality of life for residents and businesses alike.

General fund revenues in Carlsbad consist primarily of property tax and property tax in lieu of motor vehicle license fees³, sales tax, transient occupancy tax, franchise fees and business licenses. A handful of smaller revenue sources also contribute. Cities in turn utilize these funds to provide municipal services such as public safety, parks and recreation, roads and other infrastructure, and community services. Over time, revenues and expenditures can be expected to shift due to changes in land use, population, demand levels, inflationary rates and service delivery methods.

Fiscal Model Assumptions

In an effort to evaluate the impacts of new development on the city’s General Fund, a financial model was created that estimates the revenues and costs associated with ongoing operations. Such a model has a variety of limitations, beginning with the fact that, over a 25-year time horizon such as was employed here, revenues and expenditures may change in unpredictable ways. Policy decisions made by the city’s elected officials and administration will influence how services are delivered in the future – which could be different than present day operations. Changes to state law may also impact local general funds. For example, the state legislature recently eliminated subventions from motor vehicle license fees to cities. Additionally, though a market analysis has been prepared to estimate the development timeline, many factors, including the national economy and banking practices, will determine the timing and specific type of development that will actually occur.

The future development scenarios considered by the three concepts, while unique in philosophies and lifestyle approaches, are not dramatically different from each other when looking at long term fiscal impacts. That is to say that, in general, providing municipal services to a retail district in one place is not much different than providing services to a retail district two miles down the road. This is particularly true when the exact style or type of retail is not yet known. Table 5.10-1 illustrates the total net new development anticipated over the next 25 years.

In all three land use concepts, commercial and hotel uses are expected to increase the most dramatically, with significant growth in office and industrial uses as well. Though Concept B – Active Waterfront presents the most modest commercial growth, it has the most substantial industrial/office growth, as other concepts propose to change some existing industrial/office land to other uses, such as mixed use, commercial or residential. Residential uses only increase by about 10 percent.

The analysis presented in this section was based upon the city’s 2011-12 adopted General Fund Budget, and a series of assumptions on how costs and revenues will change in the future. Assumptions are intended to be conservative in nature, and efforts were made to capture growth at a reasonable rate. Information was gathered from the city’s Finance Department, the General Plan update land use consultants, existing market analyses, economic indicator reports, as well as other independent research. Below is a short summary of these assumptions. More detail on the model, the assumptions, and the methodologies used can be found in the Technical Appendix.

Chart 5.10-1: General Fund Revenues 2012

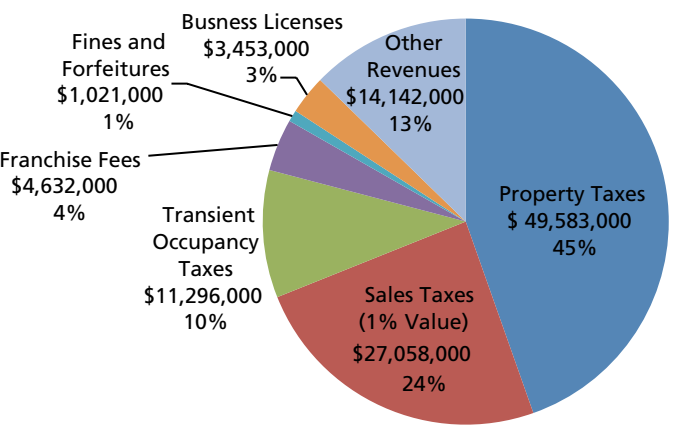


Chart 5.10-2: General Fund Expenditures 2012

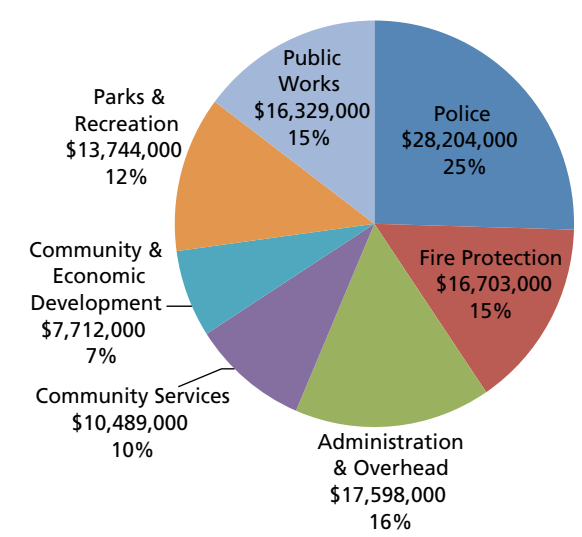


TABLE 5.10-1: NET NEW DEVELOPMENT								
	HOUSING UNITS	% CHANGE	COMMERCIAL (SQUARE FEET)	% CHANGE	INDUSTRIAL/ OFFICE (SQUARE FEET)	% CHANGE	HOTEL ROOMS	% CHANGE
Existing (2010)	44,673		3,840,591		20,532,787		3,582	
Concept A - Centers	4,410	10%	2,522,000	66%	4,419,000	22%	2,590	72%
Concept B – Active Waterfront	4,360	10%	1,471,000	38%	4,934,000	24%	2,660	74%
Concept C – Core Focus	4,160	9%	2,359,000	61%	3,437,000	17%	2,670	75%
Notes:								
a. 2010 baseline was used based on the availability of non-commercial square footage information.								
b. Net new development figures are rounded.								

Source: Working Paper 2, 2011; US Census, 2010.

3 As a part of the 2004 state budget package, approximately 90 percent of motor vehicle license fee revenue was exchanged for property tax revenue, and is typically referred to as property tax in-lieu.

- Future residential population was projected on a per unit basis, using the 2010 U.S. Census persons per household figures (2.6 persons per household for single family and condominiums, 2.3 for apartments).⁴
- Annual inflationary rates were based upon the Consumer Price Index (2.8 percent).
- Modifications to inflationary rates were made where appropriate, including for growth in employee salaries and benefits which were projected to increase by 2.5 percent annually, consistent with city practices.
- Modest capital outlay budgets were created for the police, fire and public works departments only.
- Certain services were considered to have a greater elasticity to absorb demand created by development. These generally include administrative-related functions.
- Other services were expected to require additional resources to accommodate growth, particularly certain functions within law enforcement, public works and parks and recreation. In these cases, expenditures also increased commensurate with growth on a per capita and/or per employee factor. Where both factors were used, costs were weighted more heavily towards residential uses.
- Though the land use concepts provide for the preservation of open space, it is unknown what the nature of that space will be—for example, new open space could be privately maintained with a public easement to ensure public access. Therefore, no additional expenditures were included for new parkland.
- Development timeframes were based upon a recent market study that provided growth envelopes (10-year windows). Future development estimates were annualized within the envelopes. This has the effect of creating gradual growth over time, though in reality, development will likely have years of higher and lower intensities.
- Development estimates in turn generated revenues in property taxes, based upon assessed value. Assessed values were determined based upon market values for for-sale residential products, and costs estimates from Marshall and Swift for commercial and multi-family residential uses. The city's two redevelopment project areas were taken into account as a part of this projection.
- Property transfer taxes were projected based upon historical turnover rates of properties.
- Sales taxes were projected assuming that 65 percent of new commercial development square footage would produce taxable sales. This figure was multiplied by a per square foot average sales factor (\$350). The remaining commercial square footage was assumed to accommodate vacancies as well as commercial uses that do not generate taxable sales, such as an insurance agent office. Industrial uses do currently produce some sales tax for the city, therefore 15 percent of new industrial uses were also assumed to produce sales tax revenues, on the same sales per square foot basis.
- Transient occupancy (hotel) taxes were based upon current average daily rates (\$135 for existing rooms, and \$155 for new rooms) and occupancy levels (64 percent).
- Several revenue sources were estimated on a per service population basis as appropriate. In some cases, a per capita figure was used, and in others, employment generation factors were also included, such as for franchise fee and fines and forfeiture revenues.

Summary of Findings

Strong Fiscal Outlook. The value of a long-term forecast, which utilizes conservative or normalized assumptions, is to illustrate where deficiencies or imbalances might exist or be exacerbated. In general, Carlsbad is in very good financial standing compared to many California communities due to conservative fiscal policies, good land use planning and cultivation of a healthy business community.

Balancing of Land Uses Results in Healthy Revenues. As shown, all three land use concepts provide for significant commercial development, with comparatively limited residential growth. At buildout, the total number of residents is put into greater balance with the number of jobs offered in Carlsbad. Residential land uses are often considered a “net loss” as it costs more to serve a unit than is generated through the property tax associated with it. Commercial uses, particularly where sales tax or transient occupancy taxes are created, are often “net gains.” These generalizations do not speak to the importance of balancing jobs and housing, nor other quality of life measurements; but in the case of Carlsbad, the land use concepts do present an overall balancing of costs and revenues as the ratio between residential and non-residential uses becomes more equalized over the 25 year development period. Therefore, all three land use concepts provide for significant growth in revenues and present a much better fiscal outlook than if all growth were halted today, where residential uses are in greater proportion to non-residential uses.

Strong Sensitivity to City Employee Costs. The city's primary role is to provide services, which means the majority of the city's expenditures is related to employee costs. From the police officer enforcing traffic laws to the building inspector assuring new development meets safety standards, employees are the backbone of the organization. Thus, the model is extremely sensitive to the growth of these costs. Should costs inflate faster than the anticipated 2.5 percent rate used in the projection, net revenues will be impacted.

Fiscal Impact Results. Ultimately, the three land use concepts have only minimal fiscal differences between one another. Each provides for the well-balanced buildout of Carlsbad from a financial standpoint, and improvement compared to no change. Overall, Concept C – Core Focus provides for the greatest net revenues. The following charts summarize the fiscal impacts. Please note that the forecast is intended to offer an illustrative picture of costs and revenues, provided all assumptions and existing service practices are maintained over the next 25 years. Actual revenues and expenditures will be impacted by a variety of policy decisions, state mandates, and other budget adjustments made over time.

For comparison with the earlier graphics, the total revenues and expenditures for all three land use concepts are also shown.⁵ As illustrated, the proportion of revenues related to property tax is reduced, from 45 percent currently to about 36 percent in 2036. Transient occupancy taxes become a greater revenue generator, and increase from 10 percent of the General Fund to about 19 percent. Proportional expenditures remain relatively consistent, with the greatest shift in police service, growing from 25 to about 27 percent.

⁴ Note that the population projections for the land use concepts do not delineate among single family, condominiums, and apartments. This delineation is made for fiscal impact analysis purposes only.

⁵ All figures rounded. Property tax category is also inclusive of property tax in-lieu and property transfer tax revenues. Sales tax revenue category is inclusive of Proposition 132 revenue. Other revenue category includes fees and charges for service, investment income, intergovernmental revenues and smaller miscellaneous revenues. Administration and overhead expenditure category includes policy and leadership, finance, human resources, property and environmental management and other non-departmental expenditures. Community service expenditures includes the library and cultural arts.

Chart 5.10-3: Annual Net Revenues

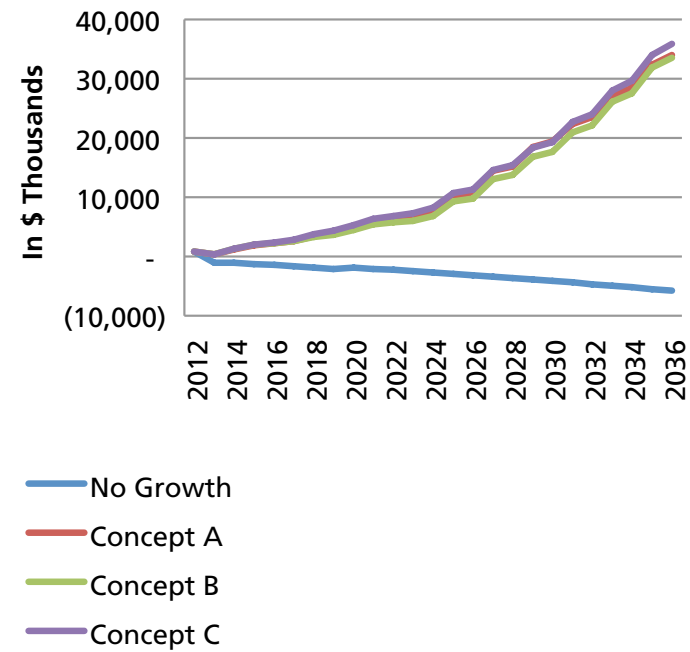


Chart 5.10-4: Concept A - Centers Revenues 2036

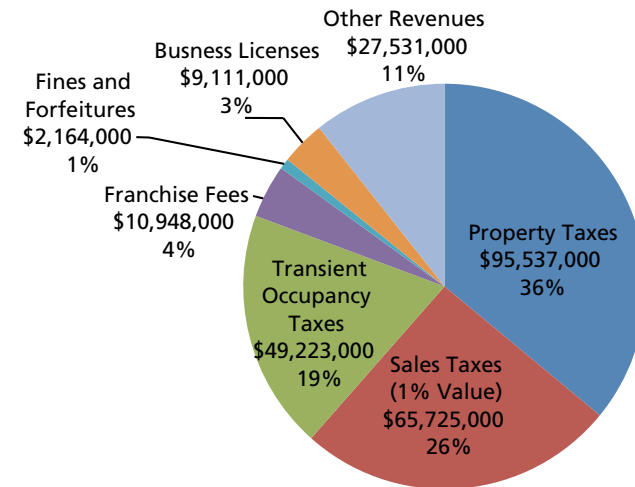


Chart 5.10-6: Concept B - Active Waterfront Revenues 2036

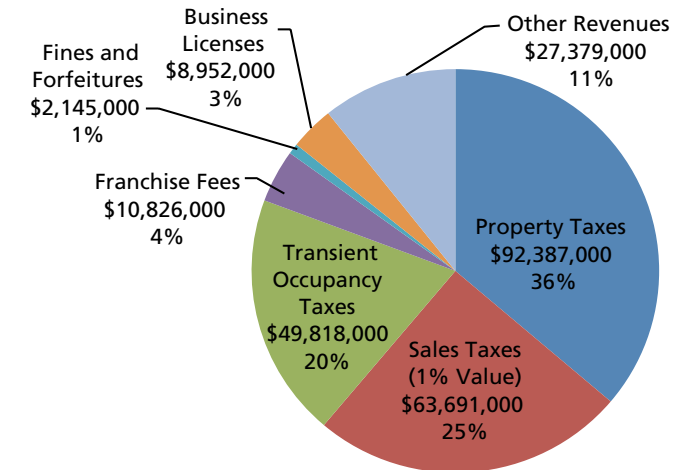


Chart 5.10-8: Concept C - Core Focus Revenues 2036

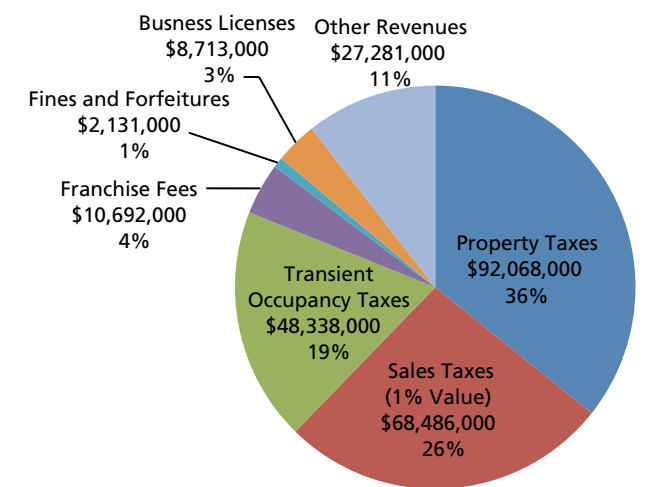


Chart 5.10-5: Concept A - Centers Expenditures 2036

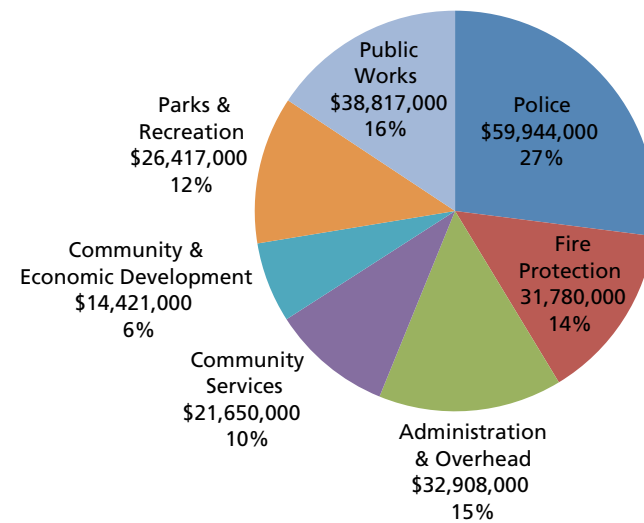


Chart 5.10-7: Concept B - Active Waterfront Expenditures 2036

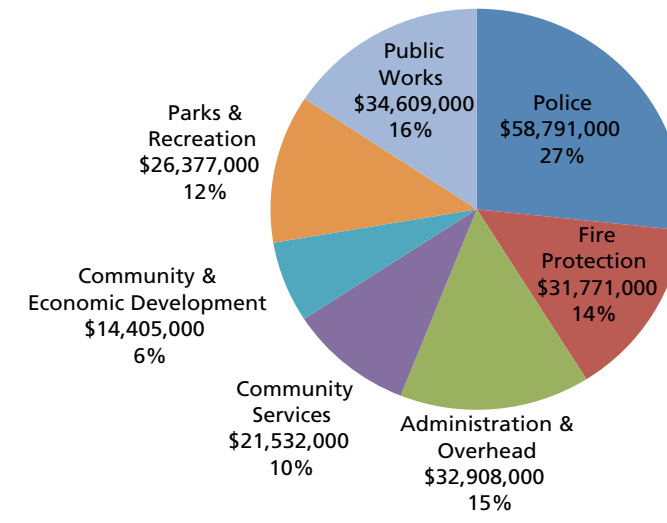


Chart 5.10-9: Concept C - Core Focus Expenditures 2036

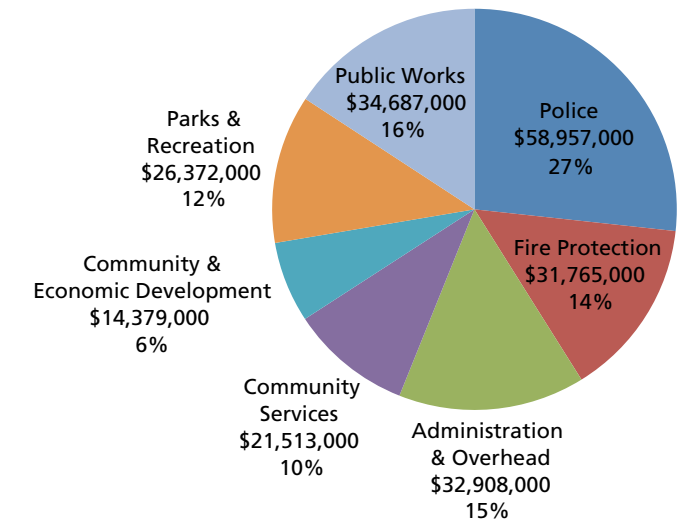


TABLE 5.10-2: NO GROWTH NET REVENUES			
NO GROWTH	2015-16	2025-26	2035-36
Revenues	122,856,000	157,392,000	201,588,000
Expenditures	124,313,400	160,545,400	207,364,700
Net Revenues	\$(1,457,400)	\$(3,153,400)	\$(5,776,700)

TABLE 5.10-3: CONCEPT A – CENTERS NET REVENUES			
CONCEPT A	2015-16	2025-26	2035-36
Revenues	129,015,000	179,651,000	257,768,000
Expenditures	126,826,400	168,776,700	223,767,000
Net Revenues	\$2,188,600	\$10,874,300	\$34,001,000

TABLE 5.10-4: CONCEPT B – ACTIVE WATERFRONT NET REVENUES			
CONCEPT B	2015-16	2025-26	2035-36
Revenues	128,972,000	177,829,000	255,724,000
Expenditures	126,683,500	168,002,000	222,192,100
Net Revenues	\$2,288,500	\$9,827,000	\$33,531,900

TABLE 5.10-5: CONCEPT C – CORE FOCUS NET REVENUES			
CONCEPT C	2015-16	2025-26	2035-36
Revenues	129,121,000	179,440,000	258,234,000
Expenditures	126,720,400	168,130,300	222,380,400
Net Revenues	\$2,400,600	\$11,309,700	\$35,853,600

Chart 5.10-10: No Growth

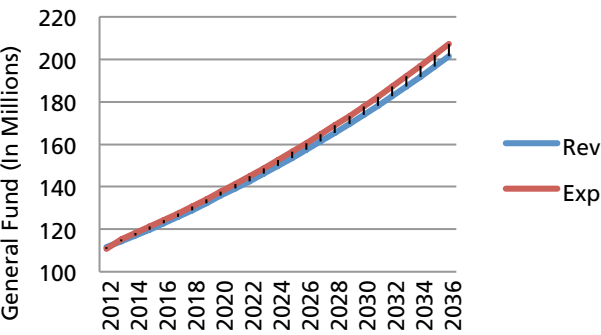


Chart 5.10-11: Concept A – Centers

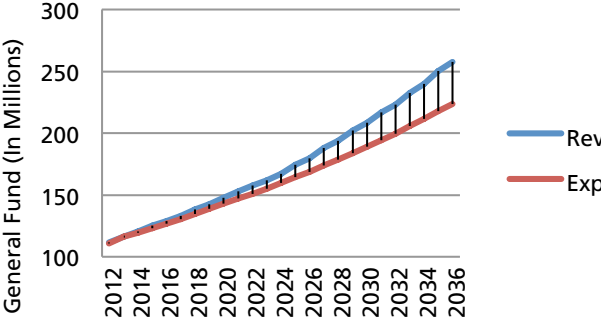


Chart 5.10-12: Concept B – Active Waterfront

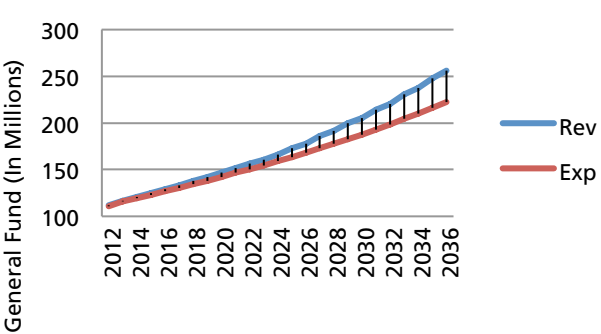
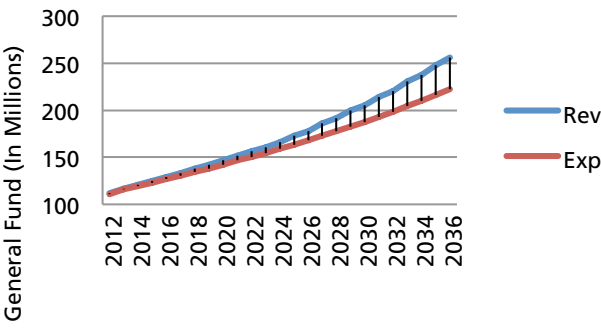


Chart 5.10-13: Concept C – Core Focus



Development Impact Fees

Development impact fees (“DIFs”) are fees charged by the City in order to mitigate the effects of development on infrastructure systems and other resources. Revenues generated by DIFs may only be used for capital or one-time projects, and may not be used for ongoing expenses related to maintenance or day-to-day service. The legal requirements for a DIF program are set forth in Government Code §§ 66000-66025, which generally states that a DIF must be reasonably related to the cost of the improvement provided by city. If a development impact fee does not relate to the impact created by development, or exceeds the reasonable cost of the necessary improvement, then the fee may be declared a special tax and must then be subject to voter approval.

Most established DIF programs such as Carlsbad’s were developed through a nexus study that links the fee to the cost of the impact that must be mitigated. Carlsbad has several DIF programs, specifically for potable water, sewer, parks, drainage areas, bridge and thoroughfare districts, habitat mitigation, and traffic impacts. The following table estimates the total DIFs that could be charged related to the development presented in the land use concepts. While every effort was made to determine the location of new development within the variety of DIF zones, the land use concepts provide a certain amount of flexibility that will influence the DIFs that are charged. Though development was phased by land use type in the fiscal model, neither it nor the land use concepts can determine the location of the development at any particular moment in time. Actual revenues may also be affected by changes in the DIFs themselves, which are likely to be re-evaluated during the buildout period.

The following table summarizes the anticipated total DIF revenues. A more detailed table can be found in the technical appendix.

TABLE 5.10-6: DEVELOPMENT IMPACT FEES			
	CONCEPT A	CONCEPT B	CONCEPT C
Bridge & Thoroughfare	\$5,172,715	\$6,458,742	\$5,569,493
Public Facilities Fee	\$103,574,143	\$107,652,328	\$108,350,898
Park In-lieu	\$29,786,676	\$29,724,203	\$28,839,020
Planned Local Drainage Fee	\$15,173,875	\$15,166,344	\$14,920,117
Sewer Benefit Area	\$3,669,640	\$1,826,750	\$4,289,300
Local Facilities Management Plan	\$3,360,400	\$3,229,000	\$3,091,500
Traffic Impact Fee	\$46,522,257	\$41,651,439	\$40,600,099
Water District Fee	\$29,978,572	\$28,165,751	\$27,911,747
Total	\$237,238,277	\$233,874,558	\$233,572,174

Source: RSG, 2011; Dyett & Bhatia, 2011

DYETT & BHATIA
Urban and Regional Planners

755 Sansome Street, Suite 400
San Francisco, California 94111
☎ 415 956 4300 📠 415 956 7315